

# **Maine Residents Opinions on Wildlife Management, Funding and Policy Issues**

by  
Kevin J. Boyle  
Brian Roach  
and  
Henry Hilton

\*Department of Resource Economics and Policy Staff Paper, REP 484.

## Table of Contents

|  |    |
|--|----|
| Introduction .....   | 1  |
| Purpose of Survey.....   | 1  |
| Survey Design .....  | 2  |
| Survey Administration .....  | 4  |
| Response Rates.....  | 5  |
| Data Reporting .....   | 5  |
| Socio-Economic Characteristics of Respondents.....                                 | 7  |
| Fish and Wildlife Management in Maine.....   | 10 |
| Who Actively Manages Maine’s Fish and Wildlife .....                               | 10 |
| Game and Nongame Management .....  | 14 |
| Summary .....  | 18 |
| Respondents Opinions on IF&W’s Funding and Budget .....                            | 18 |
| Funding.....   | 19 |
| Spending.....  | 23 |
| Summary .....  | 27 |
| Respondent Uses of Public Sources of Fish and Wildlife Management Information..... | 28 |
| Use of Public Information Sources .....  | 28 |
| Summary .....  | 31 |
| Participation in Fishing, Hunting and Wildlife-Associated Recreation in Maine..... | 32 |
| Freshwater Fishing Participation.....  | 33 |
| Hunting Participation .....  | 34 |
| Wildlife Observations .....  | 36 |
| Summary .....  | 37 |
| Loon License Plates.....   | 38 |
| Loon Plate Ownership.....  | 38 |
| Impact of Chickadee Plate on Loon Plate Sales.....                                 | 40 |
| Allocation of Loon Plates Funds .....  | 42 |
| Summary .....  | 44 |
| Wildlife Problems .....  | 45 |
| Wildlife Problems .....  | 45 |
| Solutions to Wildlife Problems .....   | 47 |
| IF&W Involvement with Wildlife Problems.....                                       | 49 |
| Summary .....  | 51 |
| Deer Management Problems .....   | 52 |
| Public Participation in Activities Related to Deer .....                           | 52 |
| Measures to Control Deer Numbers.....  | 53 |
| Wolf Management in Maine .....   | 56 |

|                                   |    |
|-----------------------------------|----|
| Support for Wolves in Maine ..... | 56 |
| Opinions on Wolves .....          | 58 |
| Summary .....                     | 59 |

## List of Tables

|  |    |
|--|----|
| Table 1. Sections Included in Each Survey Version .....  | 3  |
| Table 2. Socio-Economic Characteristics of Respondents.....  | 7  |
| Table 3. Publics' Membership in Fish and Wildlife Groups and Interest in Fish and Wildlife.....  | 8  |
| Table 4. Comparison Between Survey Data and U.S. Bureau of Census Data.....  | 9  |
| Table 5. Counties of Residence.....  | 10 |
| Table 6. Respondents' Views of Who Actively Manages Fish and Wildlife in Maine .....   | 11 |
| Table 7. Respondents' Evaluations of IF&W's Management of Game and Nongame Species.....  | 15 |
| Table 8. Respondent Evaluations of IF&W's Allocation of Management Effort Between Game<br>and Nongame.....   | 16 |
| Table 9. Respondent Views of How Much of IF&W's Funding Comes From Selected Sources.....   | 20 |
| Table 10. Respondent Evaluations of How Much of IF&W's Funding <u>Should</u> Come From .....   | 21 |
| Table 11. Respondent Views on Where Additional Funding <u>Should</u> Come From for IF&W to<br><u>Expand</u> Management Activities.....               | 22 |
| Table 12. Respondent Views on How Much of IF&W's Budget is Spent on Selected Activities.....   | 24 |
| Table 13. Respondent Views on How Much of IF&W's Budget <u>Should</u> be Spent on Selected<br>Activities .....                                       | 26 |
| Table 14. Frequency Public Uses Selected Sources to get Information About Maine's Fish<br>and Wildlife .....   | 28 |
| Table 15. Public Confidence in Selected Sources of Information About Maine's Fish and Wildlife .....   | 29 |
| Table 16. Respondents' Use of Information About Maine's Fish and Wildlife .....  | 31 |
| Table 17. Reasons for Infrequent or Never Fishing in Maine .....   | 34 |
| Table 18. Reasons for Infrequent or Never Hunting in Maine.....  | 36 |
| Table 19. Reasons for Infrequent or Never Taking Trips to Observe or Photograph Wildlife<br>in Maine .....   | 37 |
| Table 20. Reasons for Respondents' Purchases of Loon License Plates.....   | 39 |
| Table 21. Reasons Respondents with Loon Plates Would Switch to the Chickadee Plates.....   | 41 |
| Table 22. Estimated Revenue Loss from Reductions in the Sales of Loon Plates Due to the .....  | 42 |
| Table 23. Respondents' Views of How Much of the Revenue from the Sale of Loon License<br>Plates IF&W Spends on Selected Activities .....             | 43 |
| Table 24. Respondents' Views of How Much of the Revenue from the Sale of Loon License<br>Plates IF&W <u>Should</u> Spend on Selected Activities..... | 43 |
| Table 25. Types of Wildlife Problems Respondents Have Had.....   | 45 |
| Table 26. Among Respondents Who Have Had Problems, Wildlife Species Causing the Problems.....  | 46 |
| Table 27. Among Respondents Who Have Had Problems and Contacted Someone for Help,<br>How Contacted .....   | 48 |
| Table 28. Among Respondents Who Have Had Problems, Methods Used to Deal with Wildlife<br>Problems .....  | 48 |
| Table 29. Respondent View on IF&W Programs to Deal with Problem Wildlife .....   | 50 |
| Table 30. Respondent Views on Programs IF&W <u>Should</u> Have to Deal with Wildlife Problems .....  | 51 |
| Table 31. Respondents Participation in Activities Related to Deer .....  | 52 |
| Table 32. Methods Respondents Think IF&W <u>Should</u> Use to Deal with Local Deer Problems .....  | 54 |
| Table 33. Respondents Evaluations of Options to Change the Number of Deer in Maine.....  | 55 |
| Table 34. Respondent Evaluations of Selected Wolf Management Policies .....  | 58 |
| Table 35. Respondent's Agreement with Statements on Wolves in Maine.....   | 59 |

## **Introduction**

### Purpose of Survey

The Maine Department of Inland Fisheries and Wildlife (IF&W) stated in its' 1997 Strategic Plan that the objectives of the Department include providing high-quality fish and wildlife recreational opportunities and improving customer satisfaction. The Strategic Plan objectives also aim to increase opportunities for the use of inland fishery and wildlife resources for all people in Maine. Additional priorities include increasing public education and awareness of fish and wildlife issues and striving for a high level of responsiveness to customers' needs. In order to meet these objectives, IF&W conducts periodic surveys of licensed anglers and hunters, and residents of Maine to obtain data on participation, satisfaction, preferences, and opinions. This report presents the results of a survey of Maine adults (17 years of age or older) that is designed to elicit the publics' opinions on who actually manages wildlife in Maine, where funding for management efforts is obtained from, and selected wildlife management issues in Maine.

One specific issue of interest to IF&W is the replacement of the Lobster license plate with the Chickadee license plate, which has generated concern that some people will give up their Loon plates for Chickadee plates. The sale of Loon license plates provides approximately 2% of the total IF&W budget and about 28% of the Department's dedicated revenue. Some people may be purchasing Loon plates to avoid the Lobster plate, which they think is not attractive, and may switch to Chickadee plates to avoid the extra fee (donation to natural resource management) associated with the Loon plates. In addition, when the Loon plates were first introduced, Dr. Boyle found that plates with a Chickadee picture would be second in

popularity to the Loon plate.<sup>1</sup> The survey results reported here are used to estimate how many Loon plate holders may switch to the Chickadee plates and the consequent impact on revenue.

Other issues covered in the survey include public participation in fishing, hunting and other wildlife-related activities in Maine, problems Maine residents have encountered with wildlife, deer management issues, and wolf reintroduction/migration into Maine.

### Survey Design

Since the survey seeks to obtain a significant amount of information from respondents, the survey was divided into four versions with each version being administered to a separate sample. Administering the four versions to a stratified sample minimizes the amount of work of each individual respondent in answering survey questions and increases the amount of information IF&W obtains from the study without compromising the statistical validity of the data.

Each version of the survey is divided into sections with questions on specific topics grouped within a section. Some sections are repeated in more than one version, other sections are included in only one version (Table 1). Sections are repeated in versions where larger sample sizes are desired. The Loon license plate questions, for example, were included in three versions because only those who presently have Loon plates on their personal vehicle(s) would actually complete most of the questions in this section. That is, only including the Loon plate questions in one section may have resulted in an insufficient number of observations to actually predict how these people will react to the introduction of the Chickadee plates. The wolf section

---

<sup>1</sup> Intercept surveys were conducted at the Bangor Mall and the Maine Mall in Portland to estimate market penetration of conservation license plates with pictures of a bald eagle, chickadee, loon or moose.

Table 1. Sections Included in Each Survey Version

| Survey Section                             | Version 1<br>(Blue<br>cover) | Version 2<br>(Brown<br>cover) | Version 3<br>(Green<br>cover) | Version 4<br>(Tan<br>cover) |
|--|------------------------------|-------------------------------|-------------------------------|-----------------------------|
| Socio-economic characteristics             | X                            | X                             | X                             | X                           |
| Who manages wildlife in Maine              |                              | X <sup>a</sup>                |                               | X <sup>a</sup>              |
| Opinions on game and nongame<br>Management |                              | X                             |                               |                             |
| IF&W budget                                | X <sup>b</sup>               |                               |                               | X <sup>b</sup>              |
| Wildlife information questions<br>Sources  |                              |                               |                               | X                           |
| Hunting participation questions            |                              |                               | X                             |                             |
| Fishing participation questions            |                              |                               |                               | X                           |
| Wildlife observation questions             |                              |                               |                               | X                           |
| Loon license plate questions               | X <sup>c</sup>               |                               | X                             | X                           |
| Wildlife problems                          |                              |                               | X                             |                             |
| Deer management questions                  |                              | X                             |                               |                             |
| Wolf management questions                  | X                            | X                             | X                             |                             |

<sup>a</sup> Version 4 includes open-ended questions about wildlife management in Maine while Version 2 includes both open-ended and questions with categorical response options.

<sup>b</sup> Version 4 includes open-ended questions about IF&W budget and activities while Version 1 includes questions with categorical response options.

<sup>c</sup> Version 1 includes an extended set of Loon plate questions concerning the spending of Loon plate revenue.

was also included in three versions to allow a sufficient number of responses to make comparisons between different regions of the state.

Most of the survey questions were posited with fixed response options where respondents were asked to choose one option, choose all options that apply or to respond to a likert scale to reveal the intensity of the response. These types of questions presume that the investigators know the possible response options and simply have to present the appropriate set of response alternatives for respondents to choose among. The sets of questions dealing with who manages Maine's fish and wildlife (Version 2) and IF&W's budget (Version 1) were designed, in part, to test respondents' knowledge. Thus, selected questions from these sections were replicated in Version 4 with open-ended response options that allow the respondent to choose the appropriate response(s). We found that giving fixed response categories did influence respondents answers.

However, the effect was not generally that respondents gave dramatically different responses from the fixed response options posed by the investigators. Respondents generally had the right idea but did not know the specifics. Thus, we place more confidence in the responses to the fixed answer categories while contrasting these results to the response to the open-ended responses.

Each subsection of the report contains more detail on why particular questions were asked in each of section of the survey.

### Survey Administration

The survey was administered by mail in the fall of 1998 to random sample of 5,000 Maine adults. The sample was obtained from the Maine Department of Motor Vehicles and included 4,703 individuals holding a Maine driver's license as well as 297 individuals holding state identification cards. The sample was divided into four subsamples 1,250 for each survey version. The state identification holders are excluded from the results presented in this report as all 297 state identification holders were mistakenly assigned to Version 4 instead of being randomly distributed across all four subsamples. The results in this report are thus based on a sample of Maine driver license holders, which includes about 95% of the Maine adult population.

The initial survey mailing was a letter informing the individuals that they had been randomly selected to participate in the study and that they would be receiving a survey in the mail in about a week. The first survey mailing included a cover letter again explaining the purpose of the survey, the survey and a business reply return envelope. A reminder postcard was sent approximately one week later to all participants. About three weeks after the first survey mailing, a second copy of the survey was sent to nonrespondents. Finally, a third survey mailing was sent to the remaining nonrespondents about seven weeks after the first survey mailing.

## Response Rates

A total of 2,606 completed surveys were returned from Maine driver license holders. After accounting for non-deliverable surveys and deceased individuals, the overall response rate was 65%.<sup>2</sup> The response rates were 61% for Version 1, 65% for Version 2, 69% for Version 3, and 65% for Version 4.

## Data Reporting

In this report we present summary statistics that characterize respondents' answers to all survey questions. These summary statistics are generally the percentage of respondents who checked a particular category or the average for all people responding to a question. For some questions responses only apply to a selected subgroup of respondents. For example, within the section on wildlife damage, only those reporting damage were asked about the species they had problems with and only the people who said they spent money to control animal damage were asked to report how much they spent.

We also report data results for subgroups of respondents, e.g., by region of the state. This was done to identify whether respondent characteristics influenced responses. A large number of these stratifications were investigated and it is not tractable to report all of the results here. We only report stratifications where differences occur; generally greater than 10 percent for percentages and greater than 0.5 for mean rankings. We report all stratifications investigated, but do not report results for all of these analyses. If the results of a stratification are not reported, then there was either no substantial difference(s) or there were a small number of differences that did not present any useful pattern.

---

<sup>2</sup> Since the sample was approximately one year old at the time of the initial survey mailings, many surveys were undeliverable because the individual had moved or was deceased. If the survey was returned with a forwarding address from the U.S. Postal Service, the mailing information was updated and another survey was sent to the new address. If no forwarding address was given, the individual was removed from the mailing list and sent no additional mailings.

Data stratification were made by county of residence and for groupings of counties into southern (Androscogin, Cumberland, Sagadahoc, and York), central (Hancock, Kennebec, Knox, Lincoln, Penobscot from Old Town south, Oxford and Waldo) and northern (Aroostook, Franklin, Piscataquis, Penobscot north of Old Town, Somerset and Washington) Maine. Respondents were also stratified based on their reported importance of wildlife to them on a three level scale (very important versus somewhat or not important), landownership (none, zero to five acres, and more than five acres), age (35 years or younger, 36 to 65, and over 65), sex, whether they own Loon plates, whether they have hunted in Maine the past five years or not, and whether they have ever hunted deer in Maine.<sup>3</sup>

Some stratifications could be investigated for all survey questions because they were included in the socio economic section that was included in all four survey versions (self-reported importance of wildlife, land ownership, age and sex) or was know from zip code data (region of residence). Other stratifications could only be conducted for the version where the questions were asked (Loon plate ownership, participation in hunting, and participation in deer hunting).

We will report which stratifications were investigated for each question in the body of the report. As noted above, we only report results for stratifications where differences were observed.

---

<sup>3</sup> Over ninety percent of licensed hunters hunt deer in Maine. Boyle, Kevin J., Alan G. Clark, and Gerald R. Lavigne. "Highlights from the 1988 Survey of Deer Hunters." University of Maine, Department of Resource Economics and Policy, Staff Paper Series in Resource Economics, REP 454, March 1994.

## Socio-Economic Characteristics of Respondents

The average age of respondents is 48 years (Table 2). Forty-four percent of respondents are female and 64% of the sample has some education beyond high school. The average household size is about 2.9 people. The majority of respondents (78%) have lived in Maine for more than 20 years, or an average of at least 23 years. The average household income in 1997 before taxes was \$46,300. Most Maine residents own some land in Maine.

Table 2. Socio-Economic Characteristics of Respondents

| Characteristics                                    |          |
|--|----------|
| <i>Average age</i>                                 | 48 years |
| <i>Percent female</i>                              | 44%      |
| <i>Education level<sup>a</sup></i>                 |          |
| Eight years or less                                | 3%       |
| Some high school                                   | 5        |
| High school  | 29       |
| Some college or technical school                   | 28       |
| Associate degree                                   | 9        |
| B.A. or equivalent                                 | 17       |
| M.A. or equivalent                                 | 7        |
| Advanced degree (M.D., Ph.D.,etc.)                 | 3        |
| <i>Number of people in household<sup>a</sup></i>   |          |
| One  | 12%      |
| Two  | 43       |
| Three to five                                      | 43       |
| More than five                                     | 3        |
| <i>Number of years living in Maine<sup>a</sup></i> |          |
| Less than one year                                 | 0%       |
| 1-3 years  | 3        |
| 4-10 years   | 6        |
| 11-20 years  | 14       |
| Longer than 20 years                               | 78       |
| <i>Average household income</i>                    | \$46,300 |
| <i>Land Ownership</i>                              |          |
| None   | 20%      |
| Less than 1 acre                                   | 22       |
| 1 - 5 acres  | 31       |
| 6 – 25 acres                                       | 12       |
| 26 – 50 acres                                      | 4        |
| More than 50 acres                                 | 10       |

<sup>a</sup> Sums may not equal 100% due to rounding.

Seventy-seven percent of respondents do not belong to any fish and wildlife or other environmental group that operates in Maine (Table 3). Among groups that actively participate in fish and wildlife management issues in Maine, local rod and gun clubs, Maine Audubon and SAM all appear to have roughly equal membership rates. Despite these low membership rates, most respondents (76%) indicated that Maine’s fish and wildlife are “very important” to them, and only 2% replied “not important.”

The age, sex and land ownership data in Table 2, and respondents self-reports of the importance of wildlife in Table 3 are the basis for many of the data stratifications presented later in this report.

Selected socio-economic data from the survey can be compared to census data to determine if respondents, as a group, are similar to the Maine population. Census data were available from the USA Counties data base published by the U.S. Census Bureau. The three

Table 3. Publics’ Membership in Fish and Wildlife Groups and Interest in Fish and Wildlife

|  |     |
|--|-----|
| <i>No fish and wildlife groups</i>                 | 77% |
| <i>Groups<sup>a</sup></i>                          |     |
| National Rifle Association                         | 8%  |
| The Nature Conservancy                             | 5   |
| Sportman’s Alliance of Maine (SAM)                 | 4   |
| Local rod and gun club                             | 4   |
| Maine Audubon Society                              | 4   |
| National Wildlife Federation                       | 3   |
| National Audubon Society                           | 2   |
| Natural Resources Council of Maine                 | 2   |
| Sierra Club  | 2   |
| People for the Ethical Treatment of Animals (PETA) | 1   |
| Other  | 6   |
| <i>Importance of Wildlife to Respondents</i>       |     |
| Very   | 76% |
| Somewhat   | 22  |
| Not  | 2   |

<sup>a</sup> Respondents could indicate membership in more than one group.

variables that are compared are percent female, household income, and age. Respondents are more likely to be male and have a higher average household income than the Maine census data (Table 4). The age structure, as defined by percent over age 65, is similar for respondents and the Maine census. The differences in gender and income do not imply that the respondent's answers to survey questions are not representative of the population. Rather, this is only an issue if responses are influenced by gender and income.

With respect to representation of respondents from each of Maine's counties, the difference between the 1997 census estimates and the 1998 survey data only exceeds one percent for two counties (Kennebec and York) (Table 5). According to the Bureau of the Census, 45 percent of Maine residents live in our designated southern region (Androscoggin, Cumberland, Sagadahoc and York counties) for data stratifications. In contrast, slightly over 17 percent of Maine residents live in the northern regions (we do not know the population of Penobscot county north of Old Town).

Table 4. Comparison between Survey Data and U.S. Bureau of Census Data

| Variables                                   | Survey Estimate | Census Value | Test Statistic |
|---|-----------------|--------------|----------------|
| Percent female                              | 44%             | 51%          | 7.06           |
| Average household income                    | \$46,300        | \$37,200     | 13.13          |
| Percent over age 65 (of those above age 16) | 18%             | 17%          | 1.34           |

Table 5. Counties of Residence

| County       | 1997 Census Estimates<br>Population <sup>a</sup> | Survey Respondents |
|--------------|--|--------------------|
| Androscoggin | 8.2  | 7.4                |
| Aroostook    | 6.2  | 6.5                |
| Cumberland   | 20.2   | 19.4               |
| Franklin     | 2.3  | 3.0                |
| Hancock      | 4.0  | 3.9                |
| Kennebec     | 9.3  | 10.5               |
| Knox         | 3.0  | 3.4                |
| Lincoln      | 2.5  | 2.9                |
| Oxford       | 4.3  | 3.8                |
| Penobscot    | 11.5   | 10.7               |
| Piscataquis  | 1.5  | 1.7                |
| Sagadahoc    | 2.9  | 2.7                |
| Somerset     | 4.2  | 4.5                |
| Waldo        | 2.9  | 3.6                |
| Washington   | 2.9  | 3.0                |
| York         | 14.0   | 12.9               |

<sup>a</sup> U.S. CENSUS BUREAU, WWW.CENSUS.GOV/POPULATION/ESTIMATES/COUNTY/CO-98-1/98CI\_23.TXT.

### **Fish and Wildlife Management in Maine**

Fundamental to communicating with the publics who use Maine's fish and wildlife is an understanding of who the publics believe manages fish and wildlife. In this section we investigate who the publics believe manages fish and wildlife in Maine. We also investigate the publics' opinions on how IF&W should allocate management effort between game and nongame species.

#### **Who Actively Manages Maine's Fish and Wildlife**

Respondents were presented with a list of 14 groups who might be involved in fish and wildlife management in Maine and were asked to indicate whether they thought each group manages fish and wildlife in Maine. Nearly all respondents (93%) indicated that IF&W actively manages fish and wildlife in Maine (Table 6). Most respondents (78%) also indicated that the U.S. Fish and Wildlife Service actively manages fish and wildlife in Maine, and no other group

Table 6. Respondents' Views of Who Actively Manages Fish and Wildlife in Maine

| Groups <sup>a</sup>               | Does Manage | Does Not Manage | Don't Know |
|-----------------------------------|-------------|-----------------|------------|
| IF&W                              | 93%         | 1%              | 7%         |
| U.S. Fish and Wildlife Service    | 78          | 7               | 15         |
| Maine Audubon Society             | 45          | 30              | 25         |
| Maine State Parks                 | 43          | 32              | 25         |
| Sportsman Alliance of Maine (SAM) | 42          | 31              | 27         |
| Maine Forest Service              | 39          | 36              | 25         |
| The Nature Conservancy            | 33          | 32              | 35         |
| Paper companies                   | 25          | 50              | 25         |
| Farmers                           | 25          | 52              | 23         |
| Maine DEP                         | 24          | 50              | 26         |
| Local communities                 | 24          | 49              | 27         |
| Owners of small woodlots          | 23          | 51              | 25         |
| U.S. EPA                          | 19          | 52              | 30         |
| LURC                              | 15          | 51              | 34         |

<sup>a</sup> Respondents were asked to evaluate each group. Rows may not sum to 100% due to rounding.

was listed by at least 50% of respondents. Groups such as paper companies and farmers, who indirectly manage wildlife through their land-management practices, were generally not chosen as participating in active management.

We found that people in southern Maine are more likely to believe that the Maine Audubon Society actively manages fish and wildlife in Maine than do people in other regions of the state; 52%, 42% and 36%, respectively, for southern, central and northern Maine.<sup>4</sup> People in southern (46%) and northern (48%) Maine are somewhat more likely to believe that Maine State Parks actively manage fish and wildlife than do people in central Maine (38%). People in central Maine (49%) are more likely to think that SAM actively manages fish and wildlife than are people in southern (38%) and northern (38%) Maine. People in northern Maine (32%) are more likely to believe paper companies actively manage fish and wildlife than are people who live in southern (25%) or central (21%) Maine. People who live in southern (28%) and northern (26%)

<sup>4</sup> Data stratifications were conducted based on region of residence, importance of wildlife, age, sex and participation in hunting.

Maine are more likely to believe the Maine DEP actively manages fish and wildlife than are people in central Maine (18%). Finally, people in southern (31%) Maine are more likely to believe local communities actively manage wildlife than are people in central (24%) and northern (13%) Maine.

Land ownership only resulted in those who own more than five acres of land being more likely to believe that paper companies (20%, acres=0; 24%,  $0 < \text{acres} \leq 5$ ; 30%, acres < 5) and small woodlot owners (22%, acres=0; 20%,  $0 < \text{acres} \leq 5$ ; 31%, acres > 5) manage wildlife. This suggests that land owners may be more aware of the indirect effects of land management on wildlife than are people who do not own land.

People who are younger than 65 years of age are more likely to think the U.S. Fish and Wildlife Service (81%, age  $\leq 35$ ; 80%,  $35 < \text{age} \leq 65$ ; 71%, age > 65), paper companies (24%, age  $\leq 35$ ; 28% age  $\leq 65$ ; 17%, age > 65) and small woodlot owners (23%, age  $\leq 35$ ; 26%,  $35 < \text{age} \leq 65$ ; 15%, age > 65) manage fish and wildlife. Younger people were more likely to think Maine's fish and wildlife are managed by the Maine Audubon Society (50%, age  $\leq 35$ ; 44%,  $35 < \text{age} \leq 65$ ; 37%, age > 65), Maine State Parks (50%, age  $\leq 35$ ; 44%  $35 < \text{age} \leq 65$ ; 27%, age > 65), Maine Forest Service (45%, age  $\leq 35$ ; 39%,  $35 < \text{age} \leq 65$ ; 32%, age > 65) and farmers (30%, age  $\leq 35$ ; 26%,  $35 < \text{age} \leq 65$ ; 15%, age > 65). Thus, people less than 35 years of age have the broadest view of who manages Maine's fish and wildlife.

Finally, and not surprisingly, deer hunters (55%) were more likely than nonhunters (35%) to believe SAM actively manages fish and wildlife.

Overall, the results of these data stratifications indicate that region of residence, self-reported importance of wildlife and age all affect perceptions of who manages Maine's fish and wildlife resources. These differences are generally not sufficient to change the relative ranking reported in Table 5; IF&W maintains its' position at the top of the list for all stratifications.

However, most effects appear to elevate the importance of groups that affect fish and wildlife management through political lobbying or indirectly through various land-management activities.

Respondents were then asked to indicate which group they think has the primary responsibility of managing Maine's fish and wildlife, and 91% believed that IF&W has the primary responsibility. In a subsequent question, 84% think IF&W should have the primary responsibility for managing Maine's wildlife.

In Version 4 of the survey, respondents were also asked whom they think has the primary responsibility for managing Maine's fish and wildlife and who should manage fish and wildlife in Maine. These questions were not preceded by the question with the categorical listing of groups presented in Table 6. Seventy percent of respondents indicated that they think IF&W has the primary responsibility of managing Maine's fish and wildlife, nine percent wrote that they don't know, 7% indicated "the state" or politicians, and 6% indicated game wardens. The "state" could refer to IF&W and wardens as part of IF&W, which means the actual IF&W percentage could be as high as 83 percent. Sixty-seven percent of respondents, however, think IF&W should have the primary responsibility for managing Maine's fish and wildlife, nine percent did not know, 4% indicated "the state", 4% indicated the warden service. These numbers indicate that as much as 76% of respondents think that IF&W should manage Maine's fish and wildlife.

Thus, preceding questions of who has, and who should have, primary responsibility with a question that presents fixed response categories that include IF&W (a la Table 6 categories) does prompt more people to choose IF&W. It may be that some people who might be unsure are prompted by the IF&W category.

## Game and Nongame Management

Most respondents (57%) indicated that IF&W does a satisfactory job of game management (Table 7), and most respondents (51%) also think IF&W does a satisfactory job of nongame management. However, at least one out of four respondents indicated that they do not know. Of the people who have an opinion, 77 percent think IF&W is doing a satisfactory job of game management and 71 percent think IF&W is doing a satisfactory job of nongame management.

Residence within the state did not affect respondents evaluations of IF&W's game management, but people from northern (60%) Maine were more likely to think IF&W does a satisfactory job of nongame management than were people from central (53%) or southern (46%) Maine.<sup>5</sup> Older people are more inclined to believe IF&W does a satisfactory job of nongame management (50%, age  $\leq$  65; 60%, age  $>$  65). Men are more likely than women to believe IF&W does a satisfactory job of game (64% vs. 48%) and nongame (57% vs. 45%) management. Likewise, deer hunters are more likely than people who do not hunt deer to believe IF&W does a satisfactory job of game (69% vs. 51%) and nongame (57% vs. 43%) management. Given that 45% of the states population lives in the counties that comprise the southern region, younger people are IF&W's future clientele, and nonhunters out number hunters in the state, these results suggest that public approval of current IF&W management may not be sustained in the future if attempts are not made to address the concerns of the groups that do not think the agency is doing a good job of management.

---

<sup>5</sup> Data stratifications were conducted based on region of residence, importance of wildlife, age, sex and participation in hunting.

Table 7. Respondents' Evaluations of IF&W's Management of Game and Nongame Species

|   |     |
|---|-----|
| <i>Does IF&amp;W do a satisfactory job of <u>game</u> management?</i> <sup>a</sup>    |     |
| Yes   | 57% |
| No, too <u>little</u> effort into game management                                     | 12  |
| No, too <u>much</u> effort into game management                                       | 5   |
| Don't know  | 26  |
| <i>Does IF&amp;W do a satisfactory job of <u>nongame</u> management?</i> <sup>a</sup> |     |
| Yes   | 51% |
| No, too <u>little</u> effort into nongame management                                  | 18  |
| No, too <u>much</u> effort into nongame management                                    | 2   |
| Don't know  | 28  |

<sup>a</sup> Responses to each question may not sum to 100% due to rounding.

Respondents were also asked their views on IF&W's allocation of management between game and nongame species. The largest group of respondents (38%) do not know how IF&W allocates its effort between game and nongame species (Table 8). Thirty-nine percent of respondents think the Department puts nearly all or somewhat more effort into game management. In comparison, 42% of respondents think IF&W should allocate effort equally between game and nongame management, and only 27% would like to see more effort on game management. Thus, respondents either don't know or tend to believe IF&W focus' on game management, but would tend to prefer balanced effort allocated to game and nongame management.

Respondents perceptions of how IF&W allocates its' effort on game and nongame management is not affected by region of residence, but people in northern Maine (36%) are more likely to think IF&W should allocate more or all effort to game than are people in central (29%) and southern (18%) Maine, which implies that people in southern Maine are more likely to think

Table 8. Respondent Evaluations of IF&W's Allocation of Management Effort Between Game and Nongame

|  |     |
|--|-----|
| <i>How <u>does</u> IF&amp;W currently allocate its effort between game and nongame?<sup>a</sup></i>      |     |
| Nearly all to game management  | 11% |
| Somewhat more to game management   | 28  |
| Equal allocation   | 18  |
| Somewhat more to nongame management  | 5   |
| Nearly all to nongame management   | <1  |
| Don't know   | 38  |
| <i>How <u>should</u> IF&amp;W allocation its effort between game and nongame management?<sup>a</sup></i> |     |
| Nearly all to game management  |     |
| Somewhat more to game management   | 8%  |
| Equal allocation   | 19  |
| Somewhat more to nongame management  | 42  |
| Nearly all to nongame management   | 11  |
| Don't know/don't care  | 3   |
|  | 18  |

<sup>a</sup> Responses to each question may not sum to 100% due to rounding.

more effort should be allocated to nongame management.<sup>6</sup> This result appears to be consistent with the result of the regional effect on evaluations of IF&W's management of nongame species.

Self-reported importance of wildlife affects how people think IF&W should allocate its' effort between game and nongame management in that people who think wildlife is very important are more likely to think IF&W allocates most or all of its' effort to game management (42% vs. 31%) and less likely to answer don't know (33% vs. 50%) than people who answer somewhat or very important. People who think wildlife is very important are also more likely (30% vs. 14%) to believe IF&W should allocate most or all of its' effort to game management and less likely to answer don't know/don't care (14% vs. 28%) than are people who think wildlife is somewhat or not important. It is important to note that 18 percent of both of these

<sup>6</sup> Data stratifications were conducted based on region of residence, importance of wildlife, land ownership, age and sex.

groups think IF&W allocates equal effort to game and nongame management and about 42 percent of each group believes management effort should be equal.

Overall, these stratifications indicate that respondents are likely to believe IF&W is a game management agency, but would prefer to see more balance between game and nongame management. To fully address this issue, more information is needed to learn whether this is due to a misperception by the public as to how IF&W actually allocates management effort or the public is truly aware of the current management and prefers a different allocation.

People who own more than five acres of land are more likely (44%) to think that IF&W allocates most or all of its' effort to game management than are people who own less than five acres of land (38%) or no land (33%), and are less likely to answer don't know (48%, no land; 38%, acres  $\leq$  5; 31%, acres  $>$  5). Land ownership does not affect perceptions of how IF&W should allocate its' effort between game and nongame management.

Middle age people ( $35 < \text{age} \leq 65$ ) are more likely (42%) to believe IF&W allocates most or all of its' effort to game management than are younger (37%) or older (24%) people. Age does not appear to have a substantial impact on beliefs of how IF&W should manage game and nongame species.

Overall, the largest percentages of respondents believe IF&W allocates most of its management effort to game species, less than 10 percent of any group believes IF&W allocates most of its' effort to nongame management and over 30 percent of all groups answered don't know. When asked how IF&W should allocate its management effort, the largest percentage of each group, generally greater than 40 percent, said effort should be equal between game and nongame management and less than 20 percent of most groups said don't know or don't care.

## Summary

The results reported in this section indicate that the majority of respondents (93%) know IF&W has primary responsibility for fish and wildlife management in Maine and respondents (84%) believe IF&W should have this responsibility. When responses of subgroups of respondents were considered, groups that lobby for wildlife or indirectly managed wildlife through their land management, rose in relative importance.

Of the respondents who provided an evaluation, clear majorities indicated that IF&W is doing a satisfactory job of game management (77%) and of nongame management (71%). People who live in southern Maine, who are younger, who are female, and who are not deer hunters are less likely to think IF&W is doing a satisfactory job of game management. Respondents also appear to want the emphasis on game management replaced with more balanced effort between game and nongame management. While those who tend to think IF&W is not doing a satisfactory job of game and nongame management are not the traditional clientele of the agency, they do represent the majority of Maine voters and may be indicative of future public expectations of IF&W. This suggests that IF&W may want to explore why more people do not believe they are doing a satisfactory job of game management and nongame management, and must seek a careful balance between the traditional and emerging clientele groups.

### **Respondents Opinions on IF&W's Funding and Budget**

IF&W, like fish and wildlife management agencies in many other states, has experienced some rough financial times in the 1990s. The purposes of the questions in this section are to evaluate public opinions on where IF&W gets its' funding, where funding should come from, and how IF&W spends the funding it receives. This information can help in the formulation of strategies to stabilize and enhance future funding. In addition, there has been concern that

anglers and hunters provide most of the funding for IF&W and individuals who enjoy wildlife for other pursuits do not pay their fair share. The results of the questions reported here can also be useful in developing strategies to develop equitable funding strategies.

### Funding

Respondents were presented with a list of 13 sources of IF&W funding and were asked to indicate how much money they think comes from each budget source on a scale ranging from “a lot of money” to “no money” with intermediate categories of “some” and “very little”. The largest percentages of respondents believe hunting and fishing license sales provide a lot of money for IF&W’s budget (Table 9). At least 50% of respondents believe a lot or some money comes from sales of boat, ATV and snowmobile licenses, and Loon license plate fees. Note that at least one in four respondents do not know how much of IF&W’s budget comes from sources other than licenses.

IF&W’s budget comes from General Revenues (e.g., license sales and fines, Federal Revenue, and Dedicated Revenue (e.g., Loon plates and Outdoor Heritage Lottery).<sup>7</sup> The vast majority of Federal funding comes from excise taxes that are collected on sales of hunting and fishing equipment that are returned to the state for fish and wildlife management. The majority of IF&W’s funding comes from sales of hunting and fishing licenses (53%). Sales of boat, ATV and snowmobile license account for 8 percent of IF&W’s budget and fines account for 3 percent. Loon plates and the Outdoor Heritage Lottery account for 3 percent and 4 percent, respectively. If &W does not receive any funds from State Park fees or state income taxes. The federal government, on the other hand, provides 20 percent of IF&W’s funding. In general, these results

---

<sup>7</sup> IF&W’s revenue in 1998 was \$23.1 million with \$16.7 million from General Revenues, \$4.8 million from Federal revenues and \$1.6 million from dedicated revenues.

Table 9. Respondent Views of How Much of IF&W's Funding Comes From Selected Sources

| Budget Sources <sup>a</sup>    | Amount of Funding |      |             |      |            |
|--------------------------------|-------------------|------|-------------|------|------------|
|                                | A lot             | Some | Very little | None | Don't Know |
| Hunting licenses               | 39%               | 33%  | 6%          | 1%   | 22%        |
| Fishing licenses               | 38                | 34   | 6           | 1    | 22         |
| Boat, ATV, snowmobile licenses | 22                | 33   | 17          | 3    | 25         |
| Fines                          | 14                | 35   | 22          | 4    | 26         |
| Loon license plates            | 13                | 38   | 19          | 3    | 27         |
| State park fees                | 10                | 33   | 24          | 8    | 26         |
| Outdoor Heritage lottery       | 9                 | 25   | 25          | 5    | 36         |
| State income taxes             | 9                 | 21   | 28          | 13   | 30         |
| Federal government             | 7                 | 28   | 29          | 8    | 29         |
| State sales taxes              | 6                 | 16   | 30          | 18   | 30         |
| Chickadee Check-off            | 5                 | 20   | 32          | 6    | 37         |
| Nonprofit groups               | 4                 | 27   | 31          | 8    | 31         |
| Voluntary contributions        | 4                 | 24   | 38          | 5    | 29         |

<sup>a</sup> Respondents were asked to evaluate each source. Rows may not sum to 100% due to rounding.

indicate that respondents have a reasonably good idea of where IF&W's funding comes from.

The exceptions are state park fees and state income taxes where IF&W does not receive any money and the big exception is that people do not recognize the role of federal funding from excise taxes. The only systematic effect of the data stratifications appears to be that people who live in southern Maine, think wildlife is very important, own more than five acres of land, are age 35 to 65 or have Loon plates think that less money is derived from fines than do others.<sup>8</sup>

Respondents were subsequently asked to indicate how much of the IF&W budget should come from the same 13 sources. About two-thirds of respondents thought a lot of money should come from the sales of hunting and fishing licenses, and from fines paid by fish and wildlife rule violators (Table 10). There was considerably less support for the use of state sales and income taxes as sources of funding for IF&W. Respondents were also much more willing to provide an

<sup>8</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

Table 10. Respondent Evaluations of How Much of IF&W's Funding Should Come From Selected Sources

| Sources <sup>a</sup>                     | Amounts of Funding |      |             |      |            |
|--|--------------------|------|-------------|------|------------|
|  | A lot              | Some | Very little | None | Don't Know |
| Hunting licenses                         | 68%                | 24%  | 2%          | 1%   | 6%         |
| Fines from fish and game rules violators | 68                 | 21   | 3           | 1    | 7          |
| Fishing licenses                         | 67                 | 25   | 2           | 1    | 6          |
| Boat, ATV, snowmobile licenses           | 49                 | 38   | 4           | 2    | 7          |
| Loon license plates                      | 42                 | 40   | 8           | 3    | 7          |
| Outdoor Heritage lottery                 | 38                 | 33   | 9           | 4    | 17         |
| Federal government                       | 29                 | 46   | 12          | 5    | 9          |
| Chickadee Check-off                      | 28                 | 37   | 12          | 4    | 18         |
| State park fees                          | 26                 | 44   | 14          | 8    | 9          |
| Voluntary contributions                  | 26                 | 45   | 15          | 3    | 10         |
| Nonprofit groups                         | 19                 | 47   | 16          | 6    | 12         |
| State income taxes                       | 17                 | 47   | 18          | 8    | 10         |
| State sales taxes                        | 15                 | 43   | 21          | 10   | 11         |

<sup>a</sup> Respondents were asked to evaluate each source. Rows may not sum to 100% due to rounding.

opinion regarding where funding should come from than they were to indicate where they think funding currently comes from.

People who live in northern Maine, who think that wildlife is not very important or who own more than five acres of land are less likely to think funding should come from the sale of Loon plates than are others.<sup>9</sup> These same groups, plus people who are under 35 years of age, are less likely to think funding should come from the Outdoor Heritage lottery. People who think wildlife is not very important are less likely to think funding should come from income taxes. These same people, plus people who own more than five acres of land or are over 35 years of age, are less likely to think funding should come from sales taxes.<sup>10</sup>

Respondents were also asked to indicate where additional money for IF&W should come from if the state legislature mandated that IF&W increase its fish and wildlife management

<sup>9</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

<sup>10</sup> Ibid

activities. Nearly all respondents cited fines and only state income taxes were cited by less than 50% of respondents (Table 11). This general level of support, we suggest, is not overly helpful other than perhaps suggesting that respondents believe that funding should be obtained from where ever it is available.

People who think wildlife is very important were more likely than those who think wildlife is somewhat or not important to think funds should come from the sale of Loon plates (82% vs. 68%), the Outdoor Heritage lottery (78% vs. 63%), the Chickadee Check-off (72% vs. 59%), income taxes (53% vs. 32%), sales taxes (55% vs. 33%), the federal government (76% vs. 61%) and nonprofit groups (71% vs. 56%).<sup>11</sup> Age also had a substantial effect. People over 65 years of age were the least likely to think funds should come from boat, snowmobile and ATV licenses (68%), Loon plates (65%), the Outdoor Heritage lottery (66%), the Chickadee Check-off (55%), state park fees (47%), income taxes (29%) and sales taxes (41%). The split of younger

Table 11. Respondent Views on Where Additional Funding Should Come From for IF&W to Expand Management Activities

| Sources <sup>a</sup>           | Should Come From | Should <u>Not</u> Come From | Don't Know |
|--------------------------------|------------------|-----------------------------|------------|
| Fines                          | 90%              | 4%                          | 7%         |
| Loon license plates            | 79               | 11                          | 10         |
| Boat, ATV, snowmobile licenses | 77               | 14                          | 9          |
| Voluntary contributions        | 77               | 10                          | 13         |
| Hunting licenses               | 76               | 17                          | 8          |
| Fishing licenses               | 76               | 17                          | 8          |
| Outdoor Heritage lottery       | 75               | 9                           | 16         |
| Federal government             | 73               | 15                          | 12         |
| Chickadee Check-off            | 69               | 11                          | 20         |
| Nonprofit groups               | 68               | 17                          | 16         |
| State park fees                | 55               | 34                          | 11         |
| State sales taxes              | 50               | 35                          | 15         |
| State income taxes             | 48               | 37                          | 15         |

<sup>a</sup> Respondents were asked to evaluate each source. Rows may not sum to 100% due to rounding.

<sup>11</sup> IF&W's revenue in 1998 was \$23.1 million with \$16.7 million from General Revenues, \$4.8 million from Federal revenues and \$1.6 million from dedicated revenues.

people being more supportive of using income and sales taxes, general revenue funds, is interesting in that these results suggest that the support for these funds for IF&W is likely to increase in the future; the majority of people age 35 to 65 support these funding sources. People with Loon plates (58%) were more likely to support use of the sales tax than were people who do not have Loon plates (48%).

When respondents were asked where IF&W's funding comes from with an open-ended response, hunting and fishing licenses were again cited most frequently. However, state taxes and general funds were second, and no other source was cited by more than 10% of respondents. Fines and Loon plates revenues were rarely cited. These results suggest that, without prompting of categories of funding, Maine residents are generally not familiar with the funding structure of IF&W. It is also interesting to note that when people were asked where IF&W's funding should come from (again using the open-ended response format) the largest percentage said state taxes and fishing and hunting license-fees were second; again indicate that providing fixed response categories influences respondents answers.

A final budget question asked respondents if they thought the present IF&W budget was enough for the Department to manage Maine's fish and wildlife. Most respondents did not know (50%), while 37% thought the current budget is less than the Department needs, 7% thought the current budget is just enough, and 4% though the current budget is more than the Department needs.

### Spending

Respondents were asked to indicate how much money they think IF&W currently spends on fourteen activities. Respondents believe the most money is spent on law enforcement, followed by equipment, office operations, and search and rescue activities (Table 12). Respondents generally believe less money is spent on education and non-game management.

Table 12. Respondent Views on How Much of IF&amp;W's Budget is Spent on Selected Activities

| Activities <sup>a</sup>               | Amount of Spending |      |             |      |            |
|---------------------------------------|--------------------|------|-------------|------|------------|
|                                       | A lot              | Some | Very little | None | Don't Know |
| Law enforcement                       | 37%                | 32%  | 6%          | 1%   | 25%        |
| Equipment (computers, vehicles, etc.) | 33                 | 33   | 7           | 1    | 26         |
| Office operations                     | 29                 | 37   | 7           | 1    | 26         |
| Search and rescue                     | 25                 | 39   | 10          | 1    | 26         |
| Stocking fish                         | 14                 | 45   | 15          | 2    | 24         |
| Buying land                           | 12                 | 30   | 24          | 6    | 28         |
| Developing new laws                   | 11                 | 29   | 29          | 3    | 28         |
| Boat, ATV, snowmobile license sales   | 10                 | 40   | 22          | 3    | 26         |
| Hunting/fishing license sale          | 9                  | 43   | 21          | 2    | 26         |
| Endangered species                    | 9                  | 38   | 22          | 3    | 27         |
| Managing game                         | 9                  | 39   | 22          | 3    | 28         |
| Scientific research                   | 8                  | 40   | 22          | 3    | 27         |
| Managing nongame                      | 7                  | 32   | 28          | 5    | 28         |
| Education                             | 5                  | 27   | 38          | 3    | 27         |

<sup>a</sup> Respondents were asked to evaluate each activity. Rows may not sum to 100% due to rounding.

Overall, people do not view substantial funding being dedicated to fish and wildlife management and supporting research. Again, at least one in four respondents indicated that they do not know.

Considerable variation is shown in how respondents view how IF&W spends its' budget for four expenditure categories.<sup>12</sup> People who are older, feel wildlife is very important, do not own land or own less than five acres of land or are older than 65 believe more money is spent on managing sales of boat, ATV and snowmobile licenses than do others. People who think that wildlife is not very important, own more than five acres of land, are 35 to 65 years of age, are male or have Loon plates think that that less is spent on managing the sale of hunting and fishing licenses than do others. People who live in southern Maine, who own land, are age 35 to 65, or are male think less money is spent on scientific research than do others. People who live in southern Maine, think wildlife is very important, do not own land or own more than five acres or

<sup>12</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

are less than 65 years of age think less money is spent developing new laws. Overall, the greatest number of differences in perceptions of expenditures occurs for the different age groups, and most of the differences relate to the administration of license sales and the development of new laws.

IF&W's 1998 expenditures were 41% (\$9.3 million) for law enforcement, 17% (\$3.7 million) for stocking fish, 22% (\$5 million) for the management of game and nongame species.<sup>13</sup> Items such as equipment, office operations, search and rescue, etc. are largely embedded in the general expenditure categories. Thus, the notable exception on the expenditure side is how little the public thinks IF&W spends on game and nongame management.

Respondents were subsequently asked how they think IF&W should spend its budget. Activities respondents most frequently cited a lot of money for law enforcement, land purchases, endangered species management, search and rescue, and stocking fish (Table 13). These results indicate that the public's perceptions of where the money is spent differs from where they believe the money should be spent.

People who think wildlife is very important, who do not own land, who are under 35 years of age or have Loon plates think more money should be spent to buy land than do others.<sup>14</sup> People who do not own land, who are under age 35 or are female think that more money should be spent on endangered species than do others. People who live in northern Maine, do not own land, are less than 35 years of age or over 65, who are female or who do not have Loon plates think that more money should be spent on search and rescue. People who live in northern

---

<sup>13</sup> IF&W's revenue in 1998 was \$23.1 million with \$16.7 million from General Revenues, \$4.8 million from Federal revenues and \$1.6 million from dedicated revenues.

<sup>14</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

Table 13. Respondent Views on How Much IF&W's Budget Should be Spent on Selected Activities

| Activities <sup>a</sup>               | Amount of Spending |      |             |      |            |
|---------------------------------------|--------------------|------|-------------|------|------------|
|                                       | A lot              | Some | Very little | None | Don't Know |
| Law enforcement                       | 43%                | 43%  | 6%          | 1%   | 8%         |
| Buying land                           | 39                 | 36   | 12          | 5    | 8          |
| Endangered species                    | 34                 | 42   | 13          | 3    | 9          |
| Search and rescue                     | 33                 | 48   | 10          | 2    | 7          |
| Stocking fish                         | 31                 | 52   | 9           | 1    | 7          |
| Scientific research                   | 25                 | 50   | 15          | 1    | 8          |
| Managing game                         | 24                 | 42   | 19          | 7    | 8          |
| Managing non-game                     | 24                 | 43   | 19          | 6    | 8          |
| Education                             | 24                 | 49   | 18          | 2    | 7          |
| Developing new laws                   | 22                 | 45   | 21          | 5    | 8          |
| Equipment (computers, vehicles, etc.) | 12                 | 63   | 15          | 1    | 8          |
| Boat, ATV, snowmobile license sales   | 9                  | 49   | 30          | 5    | 7          |
| Hunting/fishing license sales         | 8                  | 51   | 30          | 4    | 7          |
| Office operations                     | 3                  | 60   | 27          | 3    | 8          |

<sup>a</sup> Respondents were asked to evaluate each activity. Rows may not sum to 100% due to rounding.

Maine, think wildlife is very important, own up to five acres of land, are over age 65 or are male think more money should be spent on stocking fish than do others. People who live in northern Maine, do not think wildlife is very important or own more than five acres of land think less money should be spent developing new laws than do others. The largest number of differences occur for different land ownership and age categories. People who do not own land generally think more money should be spent on the activities listed above, with the exception of stocking fish, than those who do own land. Those over 65 years of age generally think that more money should be spent on the above activities, with the exception of buying land, than those who are younger.

The open-ended question asking respondents how they think IF&W spends its budget results in the largest percentage of respondents (21%) indicating they “don’t know”. The most common activities listed include salaries, law enforcement, and wildlife

management/preservation. Management receives a higher priority here than when respondents answer the categorical question. In response to the open-ended question about how IF&W should spend its budget, wildlife management/preservation was the most common response followed by “don’t know” responses. The results of the open-ended questions indicate the public knows less about the use of IF&W’s budget than they know about revenue sources.

### Summary

The results indicate that respondents generally know that IF&W’s major revenue source is the sale of hunting and fishing licenses. However, hunting licenses are rated about the same as fishing licenses, which indicates that respondents do not recognize that there are many more anglers than hunters in the state and fishing license sale revenues exceed that of hunting licenses. Fines rise to second, behind hunting licenses when respondents are asked where revenues should come from. Data stratification generally resulted in general revenue sources, income and sales taxes, rising in prominence for selected groups of respondents. Half of respondents do not know if IF&W’s budget is adequate, but 74 percent of those who think they know, indicated that the current budget is less than IF&W needs.

Respondents generally believe that the largest amounts of money are spent on law enforcement, equipment, office operations and search and rescue, with substantially less being spent on management. Buying land and search and rescue rose in prominence when (ranked second and third) respondents were asked how IF&W should spend its’ budget.

These results indicate that the public generally knows where IF&W receives its’ revenue from and where it spends this revenue. The notable exceptions are federal funding from excise taxes collected on sales of fishing and hunting equipment and the money spent on game and nongame management.

## **Respondent Uses of Public Sources of Fish and Wildlife Management Information**

In addressing issues of game and nongame management, one of IF&W's potentially powerful tools is public information sources. In order to successfully use these sources, however, it is necessary to know what sources the public uses to obtain information about Maine's fish and wildlife resources.

### Use of Public Information Sources

The most commonly used information sources include newspapers and television news (Table 14). Most people never get information from rod and gun clubs and the Internet. Of the people who use newspapers often, 56 percent use television news often and 42 percent use outdoor programs on TV often. Of the people who use television news often, 47 percent also use outdoor programs on TV often.

People who live in central Maine are more likely (41%) to often use outdoor programs as information sources than are people from southern (27%) and northern (30%) Maine, and are also more likely (30%) to use friends or family than people from southern (23%) and northern

Table 14. Frequency Public Uses Selected Sources to get Information About Maine's Fish and Wildlife

| Sources <sup>a</sup>   | Often | Sometimes | Never |
|------------------------|-------|-----------|-------|
| Newspapers             | 39%   | 53%       | 8%    |
| Television news        | 33    | 59        | 8     |
| Outdoor programs on TV | 32    | 52        | 16    |
| Friends and family     | 25    | 59        | 16    |
| Magazines              | 20    | 54        | 26    |
| IF&W                   | 16    | 49        | 35    |
| Radio                  | 11    | 50        | 39    |
| Environmental groups   | 11    | 46        | 43    |
| Rod and gun clubs      | 7     | 19        | 74    |
| Internet               | 2     | 15        | 84    |

<sup>a</sup> Respondents were asked to report frequency of use for each source. Rows may not sum to 100% due to rounding.

(19%) Maine.<sup>15</sup> More people in central Maine never use (21%) magazines than people from southern (29%) and northern (31%) Maine. People in southern Maine are more likely (40%) to never use IF&W than are people in central (35%) or northern Maine (30%). People in northern Maine (53%) are more likely to never use environmental groups than are people from central (47%) or southern (36%) Maine. Finally, people in southern Maine (45%) are more likely to never use radio sources than are people from northern (41%) and southern (35%) Maine. These results indicate that different outlets may be more effective for IF&W to communicate with people in different regions of the state.

Respondents were subsequently asked how confident they are that information about fish and wildlife from these selected sources is true. The most confidence is placed on the IF&W and outdoor programs on television (Table 15). The least confidence is placed in internet sources, in rod and gun clubs, and environmental groups.

Table 15. Public Confidence in Selected Sources of Information About Maine's Fish and Wildlife

| Sources <sup>a</sup>   | Information Is True? |                    |               |            |
|------------------------|----------------------|--------------------|---------------|------------|
|                        | Very Confident       | Somewhat Confident | Not Confident | Don't Know |
| IF&W                   | 55%                  | 30%                | 4%            | 10%        |
| Outdoor programs on TV | 35                   | 52                 | 6             | 8          |
| Televisions            | 21                   | 61                 | 13            | 5          |
| Magazines              | 20                   | 59                 | 12            | 9          |
| Newspapers             | 19                   | 64                 | 12            | 5          |
| Friends and family     | 19                   | 55                 | 16            | 11         |
| Radio                  | 12                   | 55                 | 16            | 18         |
| Environmental groups   | 13                   | 40                 | 32            | 15         |
| Rod and gun clubs      | 12                   | 38                 | 22            | 29         |
| Internet               | 6                    | 27                 | 20            | 47         |

<sup>a</sup> Respondents were asked to report confidence in each source. Rows may not sum to 100% due to rounding.

<sup>15</sup> The only data stratification is region of residence.

People in central Maine (42%) are more likely to be very confident in outdoor programs on TV than are people from southern (36%) and northern (29%) Maine.<sup>16</sup> More people from northern Maine (25%) are very confident in newspaper sources than are people from southern (18%) and central (15%) Maine. People from southern Maine (20%) are more likely to not be confident in environmental groups than are people from central (11%) and northern (7%) Maine. These results confirm that IF&W may want to use different media outlets to effectively communicate with people in different regions of the state.

Over half of respondents (69%) actively seek information about Maine's fish and wildlife at least a few times per year and only 18% of respondents never seek this information (Table 16). Most respondents (61%) feel somewhat informed about Maine's fish and wildlife and most respondents (64%) would also like to learn more. Respondents most preferred methods of providing information about fish and wildlife are newspapers and television.

More people in southern Maine (23%) never actively seek information about Maine's fish and wildlife than people from central (20%) and northern (13%) Maine, and people from northern Maine (14%) are the most likely to seek information once a week than people in central (10%) or northern (6%) Maine.<sup>17</sup> People from northern Maine (23%) are also the least likely to feel that they are not informed about Maine's fish and wildlife (30% central; 36% southern). Region of residence does not affect whether people would like to learn more about Maine's fish and wildlife. People in southern Maine (30%) are the most likely to indicate that newspapers are the best media outlet to convey information about fish and wildlife (20% central; 22% northern).

---

<sup>16</sup> Data stratifications were based on region of residence.

<sup>17</sup> Ibid

Table 16. Respondents' Use of Information About Maine's Fish and Wildlife

|   |     |
|---|-----|
| <i>Frequency of actively seeking fish and wildlife information</i>  |     |
| Never   | 18% |
| Less than once per year   | 13  |
| About once per year   | 12  |
| A few times per year  | 33  |
| About once per month  | 15  |
| At least once per week  | 9   |
| <i>How informed respondents feel they are about Maine's fish and wildlife<sup>a</sup></i>                       |     |
| Not informed  | 30% |
| Somewhat informed   | 61  |
| Very informed   | 10  |
| <i>Would respondents like to learn more about Maine's fish and wildlife</i>                                     |     |
| Definitely yes  | 38% |
| Probably yes  | 26  |
| Maybe   | 21  |
| Probably no   | 11  |
| Definitely no   | 4   |
| <i>Respondents' choices of the outlets for IF&amp;W to provided information about Maine's fish and wildlife</i> |     |
| Newspapers  | 25% |
| Television  | 20  |
| Public meetings and workshops   | 8   |
| Talks by wildlife professionals   | 7   |
| Magazines   | 5   |
| Mailings/newsletters  | 5   |
| Telephone information hotlines  | 3   |
| Internet  | 3   |
| Newspapers and television   | 2   |
| Environmental groups  | 1   |
| Radio   | 1   |
| Fish and game clubs   | 1   |
| Newspapers, television and radio  | 1   |
| Other   | 18  |

<sup>a</sup> Responses may not sum to 100% due to rounding.

## Summary

The results of this section indicate that most people feel they are somewhat informed about Maine's fish and wildlife, but most people would also like to learn more.

Newspapers and television are the sources the public most commonly uses to get information on Maine's fish and wildlife, and IF&W is not used very often. In terms of public

confidence in information sources, IF&W and outdoor programs on TV are rated very highly, while environmental groups received the lowest confidence rating (32% not confident). The use and confidence in information sources vary by region of the state, which suggests that IF&W may be most effective at disseminating information when multiple media sources are used simultaneously.

While the use of internet sources is very low and this source of information is not deemed credible, we believe there is more opportunity for IF&W to exploit this source. The opportunity arises as respondents are most confident in IF&W as a source of information. We suggest that IF&W modify their license forms to include e-mail addresses of license holders. This would allow IF&W to assemble an e-mail directory of users, perhaps with options to sort by age, sex, license type, and geographic region of the state. When important information becomes available, the information could be posted on IF&W's homepage and e-mail messages could be sent to the appropriate group(s) of license holders. The e-mail messages would contain icons for readers to click on to directly access the appropriate information on IF&W's homepage. This tool would provide an inexpensive means of contacting license holders without the information being filtered by the media. It will also serve to increase the use of IF&W's homepage by license holders and by others who hear about this information source from license holders.

### **Participation in Fishing, Hunting and Wildlife-Associated Recreation in Maine**

A key issue relating to funding for IF&W relates to the number of people who buy fishing and hunting licenses, the major funding sources, and an ability to encourage infrequent participants to buy licenses more often to increase revenues from license sales. In dealing with equity of funding it is also important to know something about wildlife-associated recreation that

does not involve fishing or hunting. Thus, respondents were asked about their participation in fishing, hunting and wildlife-related recreation.

### Freshwater Fishing Participation

About 30% of respondents had gone fishing in Maine in at least four of the last five years, 21% had gone one to three of the last five years, and 27% had gone freshwater fishing in Maine in the past but not in the last five years. Only 21% of the sample had never gone freshwater fishing.

People who live in southern (44%) Maine are the least likely to have fished in the last five years (51% central and 62% northern). People who think wildlife is very important are more likely to have fished in the last five years (60% vs. 25%).<sup>18</sup> People under 35 (71%) are more likely to have fished in the last five years than are people age 35 to 65 (51%) and over 65 (29%). As would be expected, males are more likely to fish in the last five years (65% vs. 34%) than females. Loon license plate ownership is not related to fishing participation.

Those who fished less than four out of the last five years were asked to respond to a list of potential reasons. As seen in Table 17, the most common reasons for not going fishing more frequently are not enough time for people who have fished in the past five years and not being that interested in fishing, for people who have not fished in the past five years. Among people who fish infrequently, it appears that improving fishing quality (number and size of fish) and improving water quality (contamination) are the factors that could enhance participation.

Respondents were asked how frequently they expect to go fishing in Maine in the next five years. About 36% expect to go fishing four or five of the next five years, 21% expect to go

---

<sup>18</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

Table 17. Reasons for Infrequent or Never Fishing in Maine

| Reason <sup>a</sup>                          | Fished Less Than 4 of the Last 5 Years | Never Fished |
|--|--|--------------|
| Don't have enough time                       | 38%                                    | 9%           |
| Don't go fishing as much as I used to        | 32                                     | 4            |
| Just not interested in fishing               | 26                                     | 82           |
| Worried about contamination of fish          | 22                                     | 14           |
| Number of fish have declined in recent years | 18                                     | 1            |
| Too many fishing regulations                 | 14                                     | 4            |
| Fishing spots have decreased recently        | 13                                     | 1            |
| License is too expensive                     | 12                                     | 4            |
| Physical problems                            | 12                                     | 3            |
| Fish are too small                           | 8                                      | 0            |
| Too many boaters                             | 5                                      | 2            |
| Equipment is too expensive                   | 5                                      | 2            |
| Go fishing in other states                   | 4                                      | 2            |
| Not enough boat access                       | 4                                      | 1            |
| Too many anglers                             | 4                                      | 1            |
| Just moved to Maine                          | 3                                      | 3            |
| Don't know how but would like to learn       | 3                                      | 3            |
| Oppose fishing                               | 1                                      | 4            |

<sup>a</sup> Respondents could chose more than one reason.

one to three years, and 43% do not expect to go fishing in the next five years. These numbers are quite similar to the historical participation rates for the previous five years reported above.

### Hunting Participation

About 23% of respondents went hunting in Maine in a least four of the last five years, only 7% of respondents went one to three times in the last five years. Twenty-one percent had gone hunting in the past in Maine but not in the last five years, and nearly half of the respondents (49%) have never gone hunting in Maine. These results were used to develop the data stratifications based on participation in hunting in Maine.

The data stratifications for hunting result in some slightly different results than those reported for fishing.<sup>19</sup> People in southern (20%) Maine, as with fishing, less are likely to have

<sup>19</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

hunted in the last five years than are people who live in central (36%) and northern (41%), and this result holds for people who do not think wildlife is important (12% vs. 38%) and for women (10% vs. 47%). Land owners are much more likely to hunt in the last five years (21%, acres=0; 29% 0<acres#5; 39%, acres>5). While age had an effect on fishing participation, it does not appear to affect hunting participation. Loon plate ownership also was not related to hunting participation.

Respondents who had not gone hunting in Maine in at least four of the last five years were asked to respond to a list of potential reasons for not hunting in Maine. The most common reasons given for not going hunting more often are don't have enough time for people who have hunted in the past and not interested for those who have not hunted in the past (Table 18). Among those who have hunted in the past, IF&W may attract new participants through their programs to enhance access and educate the public that hunting is less dangerous than it was in the past.

Respondents were asked how often they expect to go hunting in Maine in the next five years. About 25% of respondents plan on hunting in Maine for four or five of the next five years, only 9% plan to go one to three years out of the next five, and 66% do not plan to go hunting in Maine in the next five years. These percentages, like those for fishing, are very similar to the participation rates for the previous five years. Respondents were asked how sure they were of their future hunting plans on a scale ranging from 0 (very unsure) to 10 (very sure), and 75% of respondents were very sure of their response.

Finally, respondents were asked how often they had purchased a Maine hunting or combination license in the last five years and not gone hunting. About 60% of respondents did not purchase a license in the last five years and 27% had purchased licenses but always went

Table 18. Reasons for Infrequent or Never Hunting in Maine

| Reason <sup>a</sup>                             | Hunted Less Than 4 of the Last 5 years | Never Hunted |
|---|--|--------------|
| Just not interested in hunting                  | 39%                                    | 77%          |
| Don't have enough time                          | 28                                     | 4            |
| Too many hunters                                | 25                                     | 15           |
| Less hunting land due to development            | 17                                     | 2            |
| Hunting is too dangerous                        | 17                                     | 29           |
| Physical problems                               | 17                                     | 3            |
| License is too expensive                        | 8                                      | 2            |
| Too many hunting regulations                    | 8                                      | 1            |
| Too difficult to get permission on private land | 7                                      | 1            |
| Number of game have declined in recent years    | 6                                      | <1           |
| Equipment is too expensive                      | 5                                      | 4            |
| Oppose hunting                                  | 2                                      | 19           |
| Just moved to Maine                             | 2                                      | 1            |
| Go hunting in other states                      | 2                                      | 0            |
| Don't know how but would like to learn          | 2                                      | 3            |
| Don't eat meat                                  | 2                                      | 6            |

<sup>a</sup> Respondents could chose more than one reason.

hunting that year. Fourteen percent of respondents had purchased a license one or more times in the last five years and not gone hunting.

### Wildlife Observation

Thirty-eight percent of respondents took trips to observe wildlife in Maine in at least four of the last five years, 32% went less than four out of the last five years and 31% percent did not take trips to observe wildlife in Maine in the past five years.

People in southern (60%) Maine were less likely to have participated in wildlife observation than people in central (71%) and northern (80%) Maine.<sup>20</sup> People who think wildlife is very important were more likely to participate than those who do not (76% vs. 43%).

Participation is also related to landownership (58%, acres=0; 66%, 0<acres#5; 83%, acres>5)

<sup>20</sup> Data stratifications were based on region of residence, importance of wildlife, land ownership, age, sex and Loon plates.

and age (76%, age #35; 70%, 35<age#65; 52%, age >65), but was not related to sex or Loon plate ownership.

The most common reason given for not taking trips to photograph or observe wildlife were not having enough time for people who have participated in the past five years and not being interested for people who have not participated in the past five years (Table 19).

Table 19. Reasons for Infrequent or Never Taking Trips to Observe or Photograph Wildlife in Maine

| Reason <sup>a</sup>                       | Taken Trips in Less Than 4 of the Past 5 Years | Not Taken Trips in the Past 5 Years |
|---|--|-------------------------------------|
| Don't have enough time                    | 53%  | 23%                                 |
| Normally don't see much wildlife          | 26   | 14                                  |
| Too difficult to find a place             | 14   | 5                                   |
| Number of wildlife has decreased recently | 10   | 4                                   |
| Just not interested                       | 8  | 45                                  |
| Physical problems                         | 7  | 9                                   |
| Just moved to Maine                       | 5  | 3                                   |
| Too expensive                             | 5  | 4                                   |

<sup>a</sup> Respondents could chose more than one reason.

### Summary

It appears that the groups with the lowest participation in fishing are people who reside in southern Maine and women. Efforts to attract more participants should be focused, at least in part, on these groups. Efforts to attract men who live in northern Maine, in contrast, may not be worth the effort in terms of the yield of new participants due to the already high participation rates. Among people who fish infrequently, it appears that improving fishing quality (number and size of fish) and improving water quality (contamination) are the factors that could enhance participation.

In terms of attracting new hunters, southern Maine has the lowest participation rate. Attracting new hunters from this region of the state and elsewhere may require programs to enhance access and educate the public that hunting is less dangerous than it was in the past.

People who live in southern Maine were also the least likely to participate in wildlife observation. This indicates a general detachment from fish and wildlife resources in southern Maine that may make it relatively more difficult to attract new anglers and hunters from this region of the state. We do not know, however, whether this possible detachment is due to a general lack of interest or due to the more suburban living in southern Maine.

Finally, ownership of Loon license plates were not more or less likely to fish or hunt than were people who do not have these plates. Thus, while the Loon plates were designed to attract revenue from people who do not buy fishing or hunting licenses, it appears that anglers and hunters are just as likely to contribute to this revenue source as people who are not anglers or hunters.

### **Loon License Plates**

As noted in the Introduction, the State of Maine is changing the design of the basic license plate from a background picture of a red lobster to a background picture of a Chickadee, which is the state bird. The Chickadee plate will be offered at no extra charge, while the Loon plate costs an extra \$15 per year. The purpose of this section is to characterize Maine residents who own Loon plates and develop estimates of the potential revenue loss from Loon plate holders switching to Chickadee plates.

#### **Loon Plate Ownership**

Twenty percent of respondents have Loon license plates on their personal vehicle. This percentage is higher than the 11% incidence rate reported by the Maine Bureau of Motor

Vehicles for registered vehicles. Some people have two cars but only one car with a loon plate. Another reason the incidence rate in the survey may be higher than that of registered vehicles is that people who have Loon license plates are likely to be interested in wildlife issues. This salience of the survey topic may have resulted in holders of Loon license plates being more likely to respond to the survey than people who do not have Loon plates. The data stratifications based on ownership of Loon plates is developed using self-reports of Loon plate ownership; we are not able to verify if these reports are in fact true.

Between 21 and 24 percent of the respondents from Cumberland (23%), Hancock (23%), Knox (21%), Lincoln (21%), northern Penobscot (22%), Piscataquis (22%), Somerset (21%), and York (24%) counties said they have Loon plates on a personal vehicle.<sup>21</sup> The counties with low incidence rates are Franklin (15%), southern Penobscot (16%), Waldo (15%) and Washington (8%). People aged 35 to 65 are much more likely to have Loon plates than those who are younger or older. No differences were identified according to the importance of wildlife or respondent sex.

Those with Loon plates were asked to indicate the reasons they purchased Loon plates. The most common reason for purchasing a Loon plate was to contribute money for the conservation of Maine's natural resources, but about 30% appear to purchase Loon plates to avoid the Lobster plates (Table 20).

Table 20. Reasons for Respondents' Purchases of Loon License Plates

| Reasons <sup>a</sup>  |     |
|---|-----|
| To contribute money for the conservation of Maine's natural resources | 82% |
| The Loon plate looks good   | 68  |
| The Lobster plate looks ugly  | 29  |
| Other reason  | 6   |

<sup>a</sup>Respondents could indicate multiple reasons.

<sup>21</sup> Data stratifications are based on county of residence, importance of wildlife, age and sex.

People who live in southern and central Maine (>83%) or who think wildlife is very important (87%) are more likely to buy Loon plates to contribute money for conservation than are people who do not belong to these groupings.<sup>22</sup> People who live in central and northern Maine (>73%) or who are younger than 65 years of age (>69%) are more likely than others to buy Loon plates because they look good. People in central and northern Maine (>32%) or who think wildlife is somewhat or not important (44%) are more likely than others to buy Loon plates because they think they Lobster plates are ugly. These results begin to suggest that people in northern Maine and people who think wildlife is not very important are more likely to switch than people in central Maine who may be more likely to switch than people in southern Maine.

#### Impact of Chickadee Plate on Loon Plate Sales

Respondents with Loon plates on their personal vehicles were asked if they would switch to the Chickadee plates when they become available. The majority of these respondents (54%) will not switch to the Chickadee plates. Only 8% of Loon plate holders will definitely switch, 9% will probably switch, and 29% are not sure if they will switch. These probabilities do not vary by region of the state.<sup>23</sup> More than half of the people who think wildlife is very important or are older than 35 will not switch, while more than half of others may switch.

Respondents who indicated they will or may switch and who are unsure if they will switch to the Chickadee plates were asked to indicate the reasons they would switch. The most common reason given for switching was to avoid the \$15 annual fee for Loon plates (Table 21). Few respondents would switch because the Chickadee plate looks better than the Loon plate. These results suggest that the cost of the Loon plates is likely to be a key consideration of people who switch from Loon plates to Chickadee plates.

---

<sup>22</sup> Data stratifications are based on region of residence, importance of wildlife, age and sex.

<sup>23</sup> Ibid

Table 21. Reasons Respondents with Loon Plates Would Switch to the Chickadee Plates

| Reasons <sup>a</sup>                                 |     |
|--|-----|
| To avoid paying \$15 per year for Loon plates        | 52% |
| The chickadee is the Maine state bird                | 36  |
| I'd just like a change                               | 26  |
| I disagree with how the Loon plate money is spent    | 10  |
| The Chickadee plate looks better than the Loon plate | 9   |
| Other reason   | 10  |

<sup>a</sup> Respondents could indicate multiple reasons.

Of the people who said they will or might switch, the majority from southern (51%) and central (54%) Maine, who think wildlife is not very important (59%) or who are 35 to 65 years of age will switch to avoid the \$15 fee.<sup>24</sup> The majority of people of 65 years of age, who may or will switch, will do so because the Chickadee is the state bird. People in northern Maine (35%) are more likely to switch just for a change than are people from southern (21%) and central (27%) Maine. People under 35 years of age (21%) are the most likely to switch because they think the Chickadee plate looks better.

An estimate of the revenue losses to IF&W from the introduction of the Chickadee plates can be made. In 1997, there were 105,538 registered Loon license plates according to the Bureau of Motor Vehicles. IF&W currently receives \$5.60 for each Loon license plate renewal. Assumptions need to be made about how to handle responses of people who indicated they will probably switch or are unsure.

We will consider four scenarios here:

- Only those who said they will “definitely switch” will switch.
- Those who said they will “definitely switch” and 75% of those who said they will “probably switch” will switch.

<sup>24</sup> Data stratifications are based on region of residence, importance of wildlife, age and sex.

- Those who said they will “definitely switch” , 75% of those who said they will “probably switch” and 50% of those who said they are “unsure” will switch.
- Everyone who said they will “definitely switch” or “probably switch” or are “unsure” if they will switch.

The first scenario will provide a minimum estimate of revenue loss and the last scenario will provide an upper bound on the potential revenue loss. The potential loss in annual revenue could be as low as \$47,000 or as high as \$270,000 (Table 22). We suspect that Scenario 3, with an annual loss of about \$170,000 may be the most likely outcome. The actual revenue decrease will be dampened by the fact that the total number of vehicles registered in the state is increasing (about a 3% increase for 1998). This also means, however, that revenue from the sale of Loon plates will not increase as much as it would have in the absence of the Chickadee plates.

Table 22. Estimated Revenue Loss from Reductions in the Sales of Loon Plates Due to the Introduction of the Chickadee Plates.

| Scenarios | Reduction in Sales of Plates | Revenue Loss <sup>a</sup> |
|-----------|------------------------------|---------------------------|
| 1         | 8,443                        | \$ 47,300                 |
| 2         | 15,567                       | \$ 87,200                 |
| 3         | 30,870                       | \$172,900                 |
| 4         | 48,547                       | \$271,900                 |

<sup>a</sup> Estimated revenue losses are rounded to the nearest \$100.

### Allocation of Loon Plates Funds

About 40% of respondents do not know how the Loon plate funds are spent (Table 23). Respondents generally view the money as spread over a number of activities. When asked how they thought the money from the sale of Loon license plates should be spent, people think the most money should be spent on protecting water quality in lakes and rivers and protecting endangered species in Maine (Table 24). It is interesting to note the slight preference for

Table 23. Respondents' Views of How Much of the Revenue from the Sale of Loon License Plates IF&W Spends on Selected Activities

| Activities <sup>a</sup>                                 | Amount of Money |      |             |      |            |
|---|-----------------|------|-------------|------|------------|
|   | A Lot           | Some | Very Little | None | Don't Know |
| Covering the cost of making and selling the Loon plates | 14%             | 29%  | 15%         | 5%   | 37%        |
| Managing state parks in Maine                           | 11              | 26   | 16          | 9    | 38         |
| Protecting endangered species in Maine                  | 10              | 30   | 18          | 5    | 38         |
| Managing wildlife that people fish or hunt              | 8               | 31   | 17          | 5    | 40         |
| Protecting water quality in lakes and rivers            | 7               | 28   | 19          | 8    | 38         |
| Managing wildlife that people do not fish or hunt       | 4               | 27   | 23          | 5    | 41         |

<sup>a</sup> Respondents were asked to evaluate each activity. Rows may not sum to 100% due to rounding.

Table 24. Respondents' Views of How Much of the Revenue from the Sale of Loon License Plates IF&W Should Spend on Selected Activities

| Activities <sup>a</sup>                                 | Amount of Money |      |             |      |            |
|---|-----------------|------|-------------|------|------------|
|   | A Lot           | Some | Very Little | None | Don't Know |
| Protecting water quality in lakes and rivers            | 53%             | 33%  | 3%          | 4%   | 8%         |
| Protecting endangered species in Maine                  | 43              | 40   | 6           | 3    | 8          |
| Managing wildlife that people fish or hunt              | 30              | 47   | 8           | 8    | 8          |
| Managing wildlife that people do not fish or hunt       | 24              | 50   | 10          | 6    | 9          |
| Managing state parks in Maine                           | 24              | 43   | 13          | 12   | 7          |
| Covering the cost of making and selling the Loon plates | 4               | 37   | 34          | 16   | 9          |

<sup>a</sup> Rows may not sum to 100% due to rounding.

spending money on game species over nongame species. The least money should be spent on covering the cost of making and selling the Loon plates.

People who live in central Maine, think wildlife is not very important, have Loon plates or who are unsure or will not switch think less money is spent making the plates than do others.<sup>25</sup>

People who live in central Maine, who are over 65 years old, who have Loon plates and who are

<sup>25</sup> Data stratifications are based on region of residence, importance of wildlife, age, sex and Loon plates. We also conducted a stratification based on whether respondents said they will definitely/probably will switch, unsure and will not switch.

unsure or will definitely not switch think more money is spent on endangered species than do others, and this pattern also holds for species people fish and hunt. People who are unsure or will not switch think more money is spent on species that people do not hunt than do others. In general, people who definitely or probably will switch think less money is spent on all activities, except making the Loon plate than do others.

When it comes to how the Loon plate monies should be spent, people who have Loon plates and will not switch think less money should be spent on making the plates than do others. People from northern Maine, who think wildlife is not very important, who are over age 65 or who are male think less money should be spent on endangered species than do others. People who live in northern Maine or won't switch think more money should be spent on species people hunt than do others. Only people who will definitely or probably switch think more money should be spent on protecting water quality than do others.

### Summary

Overall, it appears that the majority of Loon plate holders will not switch to Chickadee plates. However, a worst-case scenario will reduce IF&W's revenue from the sale of Loon plates by about 46%. We believe the more realistic scenario will reduce revenue by about 29% (\$173 thousand). While the primary reason for switching is to avoid the \$15 fee, we do not believe that IF&W and the other agencies who share the revenue from the Loon plates, should automatically reduce the fee from \$15. The reason for this caution is that we do not know the elasticity of demand. It could be the case that reducing fees would further reduce revenue because a sufficient number of people would not be retained as Loon plate holders to offset the revenue reduction from the reduced fees.

## Wildlife Problems

IF&W regularly receives requests from the public to assist citizens in dealing with wildlife-related problems. The purposes of the questions in this section of the survey were to investigate the extent of the problem in Maine, identify the share of problems where people seek assistance, and learn about the role the public views for IF&W's involvement in dealing with wildlife-related problems.

### Wildlife Problems

Respondents were asked whether they had any problems with wildlife during 1998. To assist respondents with the definition of wildlife problems, they were presented with selected examples of wildlife problems (eating garden plants and motor-vehicle collisions with wildlife). Thirty-seven percent of respondents indicated that they had wildlife problems in 1998. Those with problems were then asked to indicate their specific problem(s) from a list of categories. The most common problems were wildlife eating garden plants or ornamental shrubs, unwanted wildlife around the respondent's home or camp, and wildlife getting into garbage (Table 25). Respondents were also asked to indicate which species were causing the problem(s). The most common problem species were skunks, mice, deer and raccoons (Table 26).

Table 25. Types of Wildlife Problems Respondents Have Had

|                                 |     |
|---------------------------------|-----|
| <i>No wildlife problems</i>     | 63% |
| <i>Problems</i>                 |     |
| Wildlife eating garden plants   | 18  |
| Unwanted wildlife around house  | 13  |
| Wildlife getting into garbage   | 11  |
| Wildlife bothering pets         | 6   |
| Damage to buildings             | 5   |
| Motor vehicle collision         | 3   |
| Wildlife bothering farm animals | 1   |
| Lyme disease                    | 1   |
| Other                           | 6   |

<sup>a</sup> Respondents could indicate more than one problem.

Table 26. Among Respondents Who Have Had Problems, Wildlife Species Causing the Problems

| Species <sup>a</sup>       |     |
|----------------------------|-----|
| Skunks                     | 43% |
| Mice                       | 36  |
| Deer                       | 34  |
| Raccoons                   | 34  |
| Groundhogs (woodchucks)    | 25  |
| Squirrels                  | 24  |
| Insects                    | 20  |
| Coyotes                    | 9   |
| Bats                       | 6   |
| Bear                       | 6   |
| Rabbits                    | 3   |
| Moose                      | 2   |
| Beaver                     | 1   |
| Other species <sup>b</sup> | 20  |

<sup>a</sup> Respondents could list more than one species.

<sup>b</sup> Most common other species were porcupines, beaver, moles, crows, and pigeons.

People who live in southern Maine (67%) were the least likely to have wildlife problems, followed by central (61%) and northern (40%) Maine.<sup>26</sup> People who do not own land (81%) were the least likely to have problems, followed by people who own five or less acres (64%) and those who own more than five acres (51%). Of those who had problems, people that own more than five acres of land (27%) were the most likely to have problems with wildlife eating their gardens, followed by people that own five or less acres (17%) and those who do not own land (8%). Land owners (15%) were more likely to have unwanted wildlife around their house than people who do not own land (6%). Thus, people who live in northern Maine or who own land are most likely to have wildlife problems.

People who live in northern Maine (35%), own more than five acres (32%) or have never hunted (37%) were the least likely to report problems with skunks.<sup>27</sup> People who live in central

<sup>26</sup> Data stratifications are based on region of residence, land ownership and hunting participation.

<sup>27</sup> Ibid

Maine (41%) or who own more than five acres of land (38%) were more likely to report problems.

People who live in central Maine (42%) and land owners (>34%) were the most likely to report deer problems. People who do not own land (42%) were the most likely to report problems with raccoons. People in southern (29%) and central (25%) Maine were more likely to report problems with ground hogs than were people in northern Maine (12%). People who live in northern Maine (15%) and who own more than five acres of land (20%) were the least likely to report problems with squirrels.

The above comparisons suggest that wildlife problems vary with region of the state and are related to land ownership. People in central and northern Maine are the most likely to cite problems with specific types of wildlife, and people who own more than five acres and those who do not own land are affected by different species. While beaver problems seem to be substantial when they occur, this is not a substantial problem for nearly all of the general public.

### Solutions to Wildlife Problems

About 27% of respondents with one or more wildlife problems contacted someone to help with the problem(s). The most common contacts were game wardens and friends/family members (Table 27). The most common ways that respondents dealt with wildlife problems were to ignore the problem, set traps, and use repellants (Table 28). Very few respondents did not know who to contact.

Given the findings above, it is not surprising that we find that contacts for assistance are linked to region of the state and land ownership.<sup>28</sup> People who live in northern (55%) and central (45%) Maine are much more likely to contact a game warden than are people who live in southern Maine. People who live in southern Maine are the most likely to contact a friend (48%)

---

<sup>28</sup> Data stratifications are based on region of residence, land ownership and hunting participation.

Table 27. Among Respondents Who Have Had Problems and Contacted Someone for Help,  
Who Contacted

| Contacts <sup>a</sup>      |     |
|----------------------------|-----|
| Game Warden                | 36% |
| Friend/family member       | 33  |
| Exterminator               | 12  |
| Local dog catcher          | 9   |
| Local humane society       | 5   |
| Wildlife biologist         | 5   |
| Trapper                    | 5   |
| Hunter                     | 4   |
| Other contact <sup>b</sup> | 23  |

<sup>a</sup> Respondents could list more than one contact.

<sup>b</sup>Most common other contacts were police and retired game wardens.

or wildlife Biologist (10%). People who live in central Maine are the most likely to contact an exterminator (21%). People who own more than five acres of land are the most likely to contact a game warden (52%), wildlife biologist (10%), trapper (10%) or hunter (10%). People who own land were the most likely to contact an exterminator. Hunters (48%) were more likely to contact a game warden than were nonhunters (25%).

Table 28. Among Respondents Who Have Had Problems, Methods Used to Deal with Wildlife Problems

| Methods <sup>a</sup>   |     |
|--|-----|
| <i>Ignore the problem</i>                                    | 27% |
| <i>Methods</i>   |     |
| Set traps  | 25  |
| Use repellants   | 22  |
| Move garbage somewhere else                                  | 19  |
| Put up fence or other barrier                                | 17  |
| Set poison   | 13  |
| Wanted to contact someone for help but did not know who      | 5   |
| Pay someone to solve problem                                 | 3   |
| Other methods for dealing with wildlife problem <sup>b</sup> | 23  |

<sup>a</sup> Respondents could list more than one method.

<sup>b</sup>Most common other method was to kill the problem wildlife using other methods, normally to shoot it.

People who live in central Maine were the most likely to set traps (33%) or set out poison (17%).<sup>29</sup> People who live in southern (26%) and central (25%) were the most likely to use repellants. People who live in southern Maine were the most likely to put up a fence (22%). People who own up to five acres were the most likely to use repellants (26%) or put up a fence (18%). People who do not own land were the most likely to move their garbage (36%). Finally, hunters (21%) were less likely to ignore the problems than were nonhunters (34%).

About 45% of respondents spent money to solve their wildlife problems. Of those who paid money, about half paid less than \$20 and 14% paid more than \$100, with the average person spending about \$80. The top ten species respondents spent money to solve the problem, in order of number of respondent citations are: skunks, mice, deer, squirrels, raccoons, insects, groundhogs, coyotes, bats and moose. This relative order of ranking differs somewhat from the ranking based on the number of people listing a special problem that was reported in Table 26.

People who live in southern and central Maine (48%) were more likely to spend money than were people in northern Maine (35%).<sup>30</sup> People who do not own land (54%) were more likely to spend money than people who do own land (44%).

#### IF&W Involvement with Wildlife Problems

Respondents were asked to indicate how they think IF&W currently deals with wildlife problems (Table 29). Fifty-five percent of respondents do not know if IF&W has a program to deal with problem wildlife, and only 4% believe IF&W does not have any programs to deal with problem wildlife. Roughly one in five people believe IF&W has programs to reduce the populations of problem wildlife, to move problem wildlife, to educate the public, and to prevent

---

<sup>29</sup> Data stratifications are based on region of residence, land ownership and hunting participation.

<sup>30</sup> Ibid

Table 29. Respondent Views on IF&W Programs to Deal with Problem Wildlife

| Programs <sup>a</sup>  |     |
|--|-----|
| <i>Does not know if IF&amp;W currently has a program to deal with problem wildlife</i> | 55% |
| <i>Programs</i>  |     |
| Move problem wildlife  | 24  |
| Educate property owners about problem wildlife   | 23  |
| Prevent problems with wildlife   | 21  |
| Reduce the population of problem of wildlife   | 21  |
| Does not currently have a program  | 4   |

<sup>a</sup> Respondents could choose more than one program.

wildlife problems. Of the people who have experienced problems, 98 percent know that IF&W has a program to address problems.

Only two differences were identified across groups of respondents. Hunters were more likely than nonhunters to believe IF&W moves problem wildlife (31% vs. 18%) and were less likely to answer don't know (48% vs. 64%).<sup>31</sup>

When asked if IF&W should deal with problem wildlife, the majority of respondents (56%) thought IF&W should have a program and very few respondents (3%) thought IF&W should not have a program to deal with problem wildlife (Table 30). The most popular program was to move problem wildlife.

Hunters were more likely to indicate that IF&W should reduce problem wildlife than were nonhunters (36% vs. 26%).<sup>32</sup> People who do not own land (64%) or did not have problems (55%) were the most likely to think IF&W should have a program to prevent wildlife problems.

<sup>31</sup> Data stratifications are based on region of residence, land ownership and participation in hunting. We also did a stratification based on whether respondents did or did not have problems with wildlife.

<sup>32</sup> Data stratifications are based on region of residence, land ownership and participation in hunting.

Table 30. Respondent Views on Programs IF&W Should Have to Deal with Wildlife Problems Programs<sup>a</sup>

|   |    |
|---|----|
| <i>Should not have a program</i>                | 3% |
| <i>Don't know/don't care</i>                    | 15 |
| <i>Programs</i>                                 |    |
| Move problem wildlife                           | 56 |
| Reduce the population of problem wildlife       | 49 |
| Educate property owners about wildlife problems | 33 |
| Prevent wildlife problems before they occur     | 31 |

<sup>a</sup> Respondents could choose more than one program.

Finally, respondents were asked whether property owners should be charged a fee by IF&W for services to deal with problem wildlife. Sixty-one percent of respondents thought property owners should not be charged a fee and the money should come out of the IF&W budget. Only 21% thought property owners should be charged a fee and 17% didn't know or didn't care.

### Summary

The most common problems with wildlife are damage to gardens and ornamental shrubs and unwanted wildlife around residences. The most common problem species were skunks, mice, deer and raccoons. While there has been a lot of media attention about wildlife problems from beaver dams and vehicle collisions with moose due to the severity of each individual incident, the incidence of these problems is too low for them to show up at the top of the survey lists of problems and problem species. Problems appear to be linked to region of residence and land ownership; people in northern Maine and landowners have more problems.

Less than one third of the people with wildlife problems sought help. Of those who sought help, the largest percentage contacted a game warden. Over two thirds of respondents ignored the problem, of those who took action, the largest percentage set traps.

Most respondents (55%) do not know if IF&W has a program to deal with problem wildlife. However, over 80 percent of respondents think IF&W should have a program and the

most commonly cited programs are to move problem wildlife (56%) and to reduce the populations (49%) of problem wildlife.

### Deer Management Problems

IF&W receives numerous requests each year to address problems with deer. The purposes of the questions in this section are designed to identify public acceptance of various alternatives for controlling deer numbers in regions where problems arise.

#### Public Participation in Activities Related to Deer

Before asking respondents their opinions about selected measures to reduce deer-related problems in Maine, they were asked about their activities involving deer in Maine. Twenty-eight percent of respondents hunt deer every year, while 64% never hunt deer (Table 31). Thirty-seven percent of respondents take trips where one of the purposes is to observe deer at least once

Table 31. Respondents Participation in Activities Related to Deer

| Activities   | Percent |
|--|---------|
| <i>Frequency of hunting with the primary purpose of hunting deer? <sup>a</sup></i>   |         |
| Every year   | 28%     |
| More than half the years   | 3       |
| About half the years   | 2       |
| Less than half the years   | 4       |
| Never  | 64      |
| <i>Frequency of taking trips where one purpose is to observe or photograph deer?</i> |         |
| At least once per year   | 37%     |
| More than half the years   | 4       |
| About half the years   | 5       |
| Less than half the years   | 11      |
| Never  | 43      |
| <i>Frequency of observing or photographing deer around home or camp?</i>             |         |
| Frequently   | 26%     |
| Occasionally   | 37      |
| Rarely   | 17      |
| Never  | 20      |

<sup>a</sup> Sums for each question does not add to 100% due to rounding.

per year, while 43% never take trips to observe deer. Most respondents (63%) observe deer around their home or camp occasionally or frequently.

The data stratifications based on participation in deer hunting are developed using the data in Table 34. Thirty-six percent of respondents are deer hunters and 64 percent are not.

People who live in northern Maine (39%) think wildlife is very important (35%) are under 65 years of age (38%) or are male (44%), are more likely to have hunted every year.<sup>33</sup>

People who think wildlife is very important (43%), are under age 65 (38%) or are male (44%) are more likely to have taken at least one trip per year to observe and photograph wildlife.

People who live in northern Maine (33%), think wildlife is very important (31%) or are under age 65 (26%) are more likely to frequently observe or photograph deer around their home or camp.

Most respondents (57%) think the deer population around their residence was about right. Only 7% thought the deer population was too high and 19% thought it was too low. Seventeen percent indicated that they did not know if the deer population around their residence was too low or too high.

#### Measures to Control Deer Numbers

Respondents were asked what should be done if a local deer population becomes too high.

Respondents gave the most support to educating people about deer, increased deer hunting, leaving deer alone, or relocating deer (Table 32). Overall, little support was given for hiring professional hunters, using chemical repellants, and introducing predators. Only 6% said they did not know.

---

<sup>33</sup> Data stratifications are based on region of residence, importance of wildlife, age and sex.

Table 32. Methods Respondents Think IF&W Should Use to Deal with Local Deer Problems

| Method <sup>a</sup>                                 | Percent |
|---|---------|
| Educate people about deer                           | 43%     |
| Increase public hunting of deer                     | 39      |
| Do nothing – leave them alone                       | 26      |
| Trap deer and relocate them to other areas of Maine | 25      |
| Install fences                                      | 15      |
| Use contraceptives to reduce deer reproduction      | 11      |
| Introduce predators to control the deer population  | 7       |
| Hire professional hunters to reduce the population  | 6       |
| Use chemical repellants                             | 6       |
| I don't know  | 6       |
| Other method <sup>b</sup>                           | 12      |

<sup>a</sup> Respondents could chose more than one method.

<sup>b</sup> The most commonly listed other methods were variations on increased deer hunting or to let nature take its course.

People who think wildlife is very important are the most likely to choose education (46%).<sup>34</sup>

People who think wildlife is very important (41%), are 65 or younger (∃40%), are male (45%) or are a deer hunter (61%) are more likely to think hunting should be increased. People who live in northern Maine (33%) or are over 65 years old (38%) are most likely to say do nothing. People 35 years old and younger are the most likely to choose relocation (34%).

Respondents were also asked to rate five reasons for changing the number of deer in Maine on a scale from 0 (highly undesirable) to 10 (highly desirable). None of the deer management options received strong support; all of the average ratings were in the undesirable range (<5) (Table 33). Respondents were divided into those who hunt deer and those who have never hunted deer to explore potential differences between these groups evaluations of the deer management options. There are significant differences between deer hunters and nonhunters for all management options. Deer hunters find increasing the deer population to increase deer harvest during the hunting season to be desirable, and nonhunters find all options to be undesirable.

<sup>34</sup> Data stratifications are based on region of residence, importance of wildlife, age, sex and deer hunting.

Table 33. Respondents Evaluations of Options to Change the Number of Deer in Maine

| Options   | Average Ratings <sup>a</sup> |              |                  |
|---|------------------------------|--------------|------------------|
|   | Entire Sample                | Deer Hunters | Nonhunters       |
| The number of deer in Maine should be decreased to reduce the spread of Lyme disease if it is shown that deer help spread the disease.                                      | 3.7                          | 2.7          | 4.3 <sup>b</sup> |
| The number of deer in Maine should be increased so that more can be harvested during the deer hunting seasons.  | 3.6                          | 6.2          | 2.2 <sup>b</sup> |
| The number of deer available for wildlife observation in Maine should be increased, even if it means reducing the number of deer harvested during the deer hunting seasons. | 3.1                          | 2.3          | 3.4 <sup>b</sup> |
| The number of deer in Maine should be decreased to reduce the number of collisions involving deer and motor vehicles.   | 3.0                          | 2.4          | 3.4 <sup>b</sup> |
| The number of deer in Maine should be decreased to reduce damages to gardens, ornamental shrubs, and agricultural crops.  | 2.5                          | 2.1          | 2.7 <sup>b</sup> |

<sup>a</sup> Respondents were asked to provide a rating for each option. Average rating computed from a scale ranging from 0 (highly undesirable) to 10 (highly desirable).

<sup>b</sup> Difference between deer hunters and nonhunters is statistically significant at the 0.10 level.

While some differences were noted between groups of respondents, all but one difference was inconsequential because the average ratings of the groups continued to be less than five, which implies they are undesirable.<sup>35</sup> The notable exception is that the average rating of deer hunters for increasing deer numbers so more could be harvested in 6.2, a desirable rating, the average rating for nonhunters is a clearly undesirable 2.2. Recall from Table 34 that 64% of respondents have never hunted. Thus, the majority of Maine residents are unlikely to support a program of increasing deer numbers so more can be harvested.

<sup>35</sup> Data stratifications are based on region of residence, importance of wildlife, age, sex and deer hunting.

Most respondents (57%) think the deer population around their residence was about right. Only 7% thought the deer population was too high and 19% thought it was too low. This suggests that in general the public does not believe there is a deer problem in Maine. If a deer problem develops, the largest percentage of respondents support educating people about deer or increasing public hunting. Of five reasons provided to respondents for changing the Maine deer population, only increasing numbers for hunting was acceptable by hunters. This was the least desirable option for nonhunters. There is very little support for programs to increase or decrease Maine's deer population.

### **Wolf Management in Maine**

The presence of wolves in Maine and the potential for wolves to exist in Maine in the future have been issues of considerable debate in recent years. The purposes of the results reported here is to calibrate public opinion on passive and active reintroduction of wolves to Maine.

#### **Support for Wolves in Maine**

When asked about reestablishing wolves in Maine, only 31 percent supported (12% strongly and 19% moderately) the general idea of reestablishing wolves in Maine, and 48 percent of respondents opposed the idea (15% moderately and 33% strongly). Thus, while there is more opposition than support for reestablishing wolves in Maine, neither group constitutes a majority. Opposition to wolves is strongest in Aroostook, Franklin, northern Penobscot and Piscataquis Counties.<sup>36</sup> People who are older than 35 are more opposed than are younger people, and deer hunters are more opposed than nonhunters. People who think IF&W does a satisfactory job of

---

<sup>36</sup> Data stratifications were conducted based on county of residence, importance of wildlife, land ownership, age, sex, Loon plates and deer hunting. Additional stratifications were based on whether respondents believe IF&W puts more effort into game or nongame management, and whether IF&W should put more effort into game or nongame management.

game management are the most likely to oppose reestablishing wolves in Maine, think IF&W does an adequate job of nongame management are also likely to oppose reestablishing wolves but not to the extent of those who think IF&W does an adequate job of management. People who think IF&W does not do enough to support nongame management are the most likely to support reestablishing wolves in Maine. People who think IF&W should put more effort into game management are more likely to oppose reestablishing wolves in Maine, while people who think IF&W should put more or equal effort into nongame management are more likely to support reestablishing wolves in Maine. It is also likely that most people are responding to this emotional issue with very little information. As factual information becomes available on the details of a specific program, these percentages may change. Sixty-one percent of respondents strongly or moderately approve of protecting wolves that migrate into Maine naturally, while only 28 percent strongly or moderately oppose the idea (Table 34). Fifty-four percent of respondents oppose an active restoration program. These results indicate that there is not support for an active restoration program in Maine. Respondents do not, however, oppose protecting wolves that migrate naturally into Maine.

While people in most counties, on average, support wolves migrating into Maine naturally, residents of Aroostook, Franklin, northern Penobscot and Piscataquis Counties appear to be indifferent.<sup>37</sup> All but Franklin and Hancock counties support doing nothing, on average, and residents of these two counties appear to be indifferent. Only residents of Franklin County, on average, feel that wolves should not be in Maine, and people who live in Cumberland and Sagadahoc Counties are most likely to disagree with this statement. People who are 65 or

---

<sup>37</sup> Data stratifications were conducted based on county of residence, importance of wildlife, land ownership, age, sex, Loon plates and deer hunting. Additional stratifications were based on whether respondents support reestablishing wolves in Maine believe IF&W puts more effort into game or nongame management, and whether IF&W should put more effort into game or nongame management.

Table 34. Respondent Evaluations of Selected Wolf Management Policies

| Policies <sup>a</sup>        | Strongly Support | Moderately Support | Neither | Moderately Oppose | Strongly Oppose |
|------------------------------|------------------|--------------------|---------|-------------------|-----------------|
| Migrate into Maine naturally | 35%              | 26%                | 12%     | 9%                | 19%             |
| Do nothing                   | 31               | 22                 | 20      | 11                | 17              |
| Should not be in Maine       | 17               | 7                  | 23      | 17                | 36              |
| Reintroduction program       | 9                | 18                 | 19      | 17                | 37              |

<sup>a</sup> Respondents were asked to evaluate each option. Rows may not sum to 100% due to rounding.

younger support protection of wolves that migrate into Maine, while those over 65 are opposed; support is stronger among those 35 years of age or younger. People 65 or younger oppose the statement that wolves should not be in Maine, while those over 65 support this statement. People who strongly or moderately support reestablishing wolves in Maine, support reintroduction, protection and doing nothing, with the strongest support for protection. The people who are not sure support protection and doing nothing. People who oppose reestablishing wolves in Maine only support doing nothing. The stratification based on how IF&W should allocate it's effort between game and nongame management only resulted in those who think more effort should be dedicated to nongame supporting reintroduction. All three groups supported protection and doing nothing, with the greatest support for protection by the groups that support equal or more effort to game management.

### Opinions on Wolves

Respondents were asked a series of questions about their perceptions of wolves. Most respondents (73%) either strongly or somewhat agree with the statement that wolves would decrease the population of deer and moose in Maine (Table 35). The majority of respondents, however, either strongly or somewhat agree that wolves have a right to exist in Maine (66%) and that they would enjoy seeing wolves in Maine (55%). Most respondents do not think wolves will increase tourism in Maine (55%) or indicate that they will be less likely to visit areas in Maine with wolves (56%).

Table 35. Respondent's Agreement with Statements on Wolves in Maine

| Statements <sup>a</sup>   | Strongly Agree | Somewhat Agree | Not Sure | Somewhat Disagree | Strongly Disagree |
|---|----------------|----------------|----------|-------------------|-------------------|
| Wolves would decrease deer and moose population in Maine            | 35%            | 38%            | 16%      | 8%                | 5%                |
| Wolves have a right to exist in Maine                               | 34             | 32             | 12       | 7                 | 14                |
| I would enjoy seeing or hearing a wolf in the wild in Maine         | 29             | 26             | 15       | 9                 | 21                |
| Wolves should not be established in areas of Maine open to hunting  | 26             | 13             | 25       | 18                | 18                |
| I would be concerned that wolves would harm my pets                 | 23             | 22             | 17       | 18                | 19                |
| Wolves would decrease hunting quality in Maine                      | 23             | 15             | 30       | 16                | 16                |
| I'm worried that wolves would spread rabies in Maine                | 20             | 20             | 29       | 15                | 17                |
| I would be afraid if I saw a wolf in the wild in Maine              | 20             | 19             | 18       | 19                | 25                |
| Wolves would kill a lot of livestock in Maine, like cows and sheep  | 19             | 20             | 30       | 19                | 13                |
| I would be less likely to visit areas in Maine with wolves          | 18             | 11             | 15       | 21                | 35                |
| Wolves would be important to the ecology of Maine                   | 15             | 25             | 30       | 10                | 21                |
| Wolves would keep the population of other Maine wildlife in balance | 14             | 29             | 30       | 10                | 17                |
| More tourists would visit Maine if wolves were here                 | 4              | 10             | 31       | 22                | 33                |

<sup>a</sup> Respondents were asked to indicate whether they agreed or disagreed with each statement. Rows may not sum to 100% due to rounding.

### Summary

There is only weak support for reestablishing wolves in Maine. The only program that the majority of respondents (61%) supported was protecting wolves that migrate naturally into Maine.

The majority of respondents agree that wolves will lead to decreases in the populations of deer and moose, that wolves have a right to exist in Maine, and they would enjoy seeing or hearing wolves in Maine. The only statement that a majority of respondents disagreed with is

that wolves would attract more tourists to Maine. These results confirm that people are not opposed to wolves, but are opposed to active programs to reestablish wolves in Maine.